

243

CORRESPONDENCE *March 1-19, 1958*

N. WIENER MC 22

CYBERNETIQUE

A. S. B. L.

Secrétariat permanent - Secretaryship

13. RUE BASSE MARCELLE

NAMUR (BELGIQUE)

TEL. 279.81 - 279.82

N°.....

Dear Sir,

We have the pleasure to send you, hereby, several reports regarding the activity of the International Association for Cybernetics during the year 1957, and the proceedings of the general Assembly which took place on the 14th of December.

The reading of these papers will tell you how the Board of Administration has fulfilled its mission and also how it is realizing the general programme that has been set up.

We beg you to note that the collecting of members which is one of the aims of the Association has been really successful. Indeed, at the end of 1957, we grouped 686 affiliates belonging to 33 nations. This task will be continued.

We would like also to draw your attention to the different points of our programme for 1958, which, we are sure, will retain all your interest.

- 1°) The proceedings of the International Congress of 1956 will be soon published. If you have not yet ordered a volume of them, write us as soon as possible and, so, it will be possible to you to take advantage of the subscription price specially reserved to members.
- 2°) The proceedings of the International Information Days on economic and social aspects of Automation will be printed. They will be published in April or May. Their cost price has been fixed by the Board of Administration at 75 Belgian francs for the Members, instead of 150 Belgian francs for the other ones. A form will be sent to you in a few weeks.
- 3°) From this year forth, the Association has decided to publish an international review on Cybernetics, under the name "Cybernetica". Subscription to this quarterly review will be offered to the members at a price 50% lower than the one paid by the other subscribers.

.../..

1/2
4.25
✓

4°) The second International Congress for Cybernetics will be held in Namur from the 3rd to the 10th of September 1958. You will find, hereby, all details regarding this Congress and a membership form, we request you to fill in and return to us, as soon as possible.

If you intend again to take part to our activities, as we are convinced you will, we shall be very obliged if you pay your membership fee for 1958, according to the regulations as set out in note below (I).

We have decided to maintain the same conditions as during the previous year, that is to say, 200 Belgian francs.

Allow us, endly, to insist on the sending of your membership form " Congress of 1958 " as soon as possible.

Owing to the World Fair of Brussels, the problem of lodging will present a great lot of difficulties. These ones might be resolved by sending us your adhesion, by return of post.

Thanking you beforehand for your cooperation, we remain,

Yours faithfully,

The Managing Administrator,

The President,

J. LEMAIRE.

G.R. BOULANGER.

(I) The amount can be paid:

- a) by banker's order made out to the Association Internationale de Cybernétique, account n° 7785I of the Banque de la Société Générale de Belgique, Namur (Belgique);
- b) by cheque made out to the Association Internationale de Cybernétique, 13, rue Basse Marcelle, Namur (Belgique);
- c) through the Post-Office, by money-order made out to the Association Internationale de Cybernétique, 13, rue Basse Marcelle, Namur(Belgique);
- d) through the Office des Chèques Postaux, account n° 453.56 of the Association Internationale de Cybernétique, 13, rue Basse Marcelle, Namur (Belgique).

[ms 4/23/58]

International Association for Cybernetics

Second International Congress on Cybernetics

NAMUR, September 3rd to 10th, 1958

**Under the Honorary Presidency
of the Governor of the Province of Namur**

The International Association for Cybernetics is organizing the Second International Congress on Cybernetics in Namur, Belgium, from September 3rd to September 10th, 1958. This Congress falls within the range of activities proper to the Association, as defined in Article 3 of its statutes :

- « The aim of the International Association for Cybernetics is to ensure a permanent and
- » organized liaison between scientists whose work, in various countries, is connected with
- » any aspect of cybernetics.
- » The Association strives to advance the science of cybernetics and its technical appli-
- » cations, and to publicize the results obtained in this field. It will take all necessary
- » steps to achieve its objectives. »

THE PURPOSE OF THE CONGRESS.

The Second International Congress on Cybernetics will again bring together people with a common interest in cybernetics, thus continuing the work of the 1956 Congress which was attended by 800 delegates from 22 countries. As in 1956, the organizers are unwilling to set too precise a limit to the range of subjects under discussion. On the contrary, they hope for the widest possible exchange of views and information.

ORGANIZING COMMITTEE.

The Organizing Committee of the Congress is made up as follows :

President : Prof. Georges R. BOULANGER (Belgium), of the Polytechnic Faculty of Mons and of Brussels University.

Members : René CLOSE (Belgium), Barrister at Namur ;
Louis COUFFIGNAL (France), Inspector-General of Education, Director of the Automatic Computation Laboratory, Institut Blaise Pascal, Paris ;
John DIEBOLD (U. S. A.), Management Consultant, President of John Diebold and Associates, Inc., New York ;
W. Grey WALTER (United Kingdom), Director of the Physiological Department of the Burden Neurological Institute, Bristol.

Permanent Delegate : Josse LEMAIRE (Belgium), Director of the Economic, Social, and Cultural Office of the Province of Namur.

PROGRAMME.

Subjects dealt with at the Congress will be divided into the following six groups :

1. Information (information theory, computing machinery, etc.).
2. Automatic machinery (the application of cybernetics to machines).
3. Automation (the use of automatic machinery in industry and office work).
4. The economic and social effects of automation.
5. Cybernetics and the social sciences.
6. Cybernetics and biology.

GENERAL ORGANIZATION.

The languages used at the Congress will be French and English.

The programme will include plenary sessions and meetings of the various sections. A concluding conference will synthesize the general results of the Congress.

The plenary sessions will be held in the mornings. General lectures will be given on the subjects mentioned above.

The section meetings will be held in the afternoons. Papers will be read and discussed. There will be as many sections as are necessary to cover the maximum amount of ground.

The concluding conference of the Congress will be attended by the chairman and secretaries of each section.

The proceedings of the Congress will be published.

FEES.

All those wishing to take part in the Congress are invited to return the attached form, duly filled up, to the Secretariat of the International Association for Cybernetics, 13, rue Basse-Marcelle, Namur, Belgium.

The fees for attending the Congress have been fixed as follows :

— Members of the International Association for Cybernetics	200 frs.
— Non-members	400 frs.

No fees will be charged to the authors of papers.

NOTICE TO AUTHORS OF PAPERS.

Authors of papers are requested to send the title and a summary of the paper to the Secretariat as soon as possible, and in no case later than June 1st, 1958. This summary should not exceed one type-written page.

OUTSIDE ACTIVITIES.

The second General Assembly of the International Association for Cybernetics will be held during the Congress.

A visit to the 1958 Brussels World's Fair will be arranged for the members of the Congress and their families.

In addition, a series of excursions will be organized for the persons accompanying the congressists but not attending the meetings.

Registration forms for membership of the International Association for Cybernetics may be obtained on request from the Secretariat, 13, rue Basse-Marcelle, Namur, Belgium.

INTERNATIONAL ASSOCIATION FOR CYBERNETICS

SECOND INTERNATIONAL CONGRESS ON CYBERNETICS

APPLICATION FORM

Please complete this form in block letters and return it, as soon as possible, to :

Secretariat
ASSOCIATION INTERNATIONALE DE CYBERNETIQUE
13, rue Basse-Marcelle
NAMUR, Belgium

SURNAME :	First name :
-----------	--------------

Rank and Profession :

Nationality :	Language chosen (French or English) :
---------------	---------------------------------------

Institution or Organization, if any, of which the participant is a delegate :

Full postal address :

The participant will be accompanied by the following persons :

Surname	First name	Relationship
1.
2.
3.
4.

I am interested in the following subjects (1) :

Information / Automatic machinery / Automation / Economic and social effects of automation / Cybernetics and social sciences / Cybernetics and biology.

I shall present a paper on the following subject (1) :

Information / Automatic machinery / Automation / Economic and social effects of automation / Cybernetics and social sciences / Cybernetics and biology.

Title of the Paper :

.....
.....
.....
.....

Fees.

Members of the International Association for Cybernetics..... 200,— Belgian francs.
Non-Members 400,— Belgian francs.

No fees will be charged to the authors of papers.

I am paying the fee (1) :

by banker's order made out to the Association Internationale de Cybernétique, Account N° 77.851 of the Banque de la Société Générale de Belgique, Namur (Belgique) ;

by cheque made out to the Association Internationale de Cybernétique, 13, rue Basse-Marcelle, Namur (Belgique) ;

through the Post-Office, by money-order made out to the Association Internationale de Cybernétique, 13, rue Basse-Marcelle, Namur (Belgique) ;

through the Office des Chèques Postaux, Account N° 453.56 of the Association Internationale de Cybernétique, 13, rue Basse-Marcelle, Namur (Belgique).

I desire / do not desire / to receive literature relating to the International Association for Cybernetics, with a view to my eventual registration as member (1).

At, the 1958.

.....
(Signature)

(1) Strike out when not applicable.

Association Internationale
de Cybernétique

A. S. B. L.

International Association
for Cybernetics

A. S. B. L.

13, RUE BASSE-MARCELLE, NAMUR (BELGIQUE)

ANNÉE 1958
YEAR

CARTE DE MEMBRE
MEMBER'S CARD

Monsieur Norbert WIENER

BELMONT.

Le Trésorier, The Treasurer,

Frs : 200, -

I. A. 10

Liegfried Pöder

Tübingen, den 3.3.1958
Derendingern. 28

LL

Hochverehrter Herr Professor!

Gestatten Sie mir,
wenn ich Ihre Zeit kurz im Ausmaß nehme.

Während ich zufällig in einer bekannten
deutschen Zeitschrift eine Titelgeschichte gelesen
habe, kann ich nicht umhin, Ihnen
ein paar Zeilen zu schreiben.

Ihre Bedeutung als Wissenschaftler und
Fachmann auf dem Gebiet der Elektroenergie-
technik und der Kybernetik ist weit
und breit bekannt.

Zwar verhalte ich davon nur wenig,
es hat mich aber trotzdem sehr interessiert.
Diese Entwickelung können wir nicht
mehr aus dem Wege gehen.

Wird man es aber diese neue
„Erwingerkraft“ des menschlichen
Geistes für friedliche Zwecke und zum
Wohle des Menschen zu nutzen wissen,
dann wird es kein Fluch, sondern
ein Segen für alle sein.

Liegt es doch immer an den
Menschen - wie Shakespeare sagt -
was er aus allem macht.

Es liegt es in der Hand.

Wenn aber, hochverehrter Herr Professor,
dort ich Ihnen mitteilen, daß ich
mit großem Interesse gelesen habe,
daß Sie Herr Vater aus Polen nach
Amerika eingewandert ist.

Wenn mich aber, daß Sie Herr
Vater Professor für Slavistik an
der Harvard-Universität war.

Sie habe mich darüber gefreut,
da ich selbst aus Polen komme.
In Posen bin ich geboren.

Studiere seit über vier Jahren
Slavistik (in erster Linie russische
Literatur und Geistesgeschichte).

Meine Mutter war eine gebürtige
Polin, Vater eingewanderter Deutscher.

Das würde ich Ihnen unbedingt
mitteilen!

Sie werden ja verstehen, Herr Professor,
daß es mich freut, wenn ich
höre, daß berühmte Männer
aus meiner Heimat kommen.

Ich höre immer wieder, daß
in den USA viele Polen wohnen
und ebenso Emigranten aus
der östlichen Welt.

Das ist es, was ich Ihnen
schreiben wollte.

Es war mir ein Bedürfnis.

Ich vermisse oft vergeblich von hier
aus die Welt zu erreichen.

Meine Möglichkeiten sind sehr
beschränkt, da ich als Student und
völlig allein stehend sehr schwer zu
überzeugen bin.

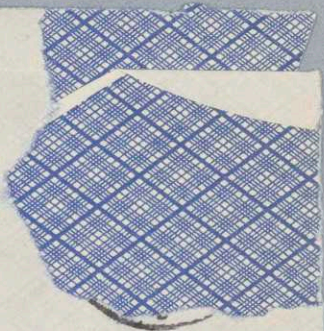
Ihnen Professor, ich danke Ihnen
und verneige Sie meiner besonderen
Hochachtung.

Mit ergebenden Grüßen

Ihr
Friedrich Röder

Tübingen
Detenringstr. 28

Einsenden



Glenn
Prof. Dr. Norbert Wiener
Boston

Technische Hochschule
Massachusetts

Siegfried Röder, Grünlingen
Derendingenstr. 28



March 3, 1958

Mr. Robert Gordon
136 Pleasant Street
Brookline, Mass.

Dear Mr. Gordon:

The enclosed correspondence was sent to
you care of Professor Wiener. I believe it is
self-explanatory.

Sincerely yours,

Secretary to
Professor Norbert Wiener

HEADQUARTERS
OKLAHOMA CITY AIR MATERIEL AREA
UNITED STATES AIR FORCE
TINKER AIR FORCE BASE, OKLAHOMA

In Reply Refer To:

OCCLA

MAR 4 1958

Mr. Norbert Wiener
Professor of Mathematics
The Massachusetts Institute of Technology
Cambridge, Massachusetts

Dear Mr. Wiener:

Inclosed is a discussion of what I believe to be a much needed, but as yet undeveloped computer program.

This letter is being written to try to obtain useful information in the development of an IBM 705 digital computer program to handle Cases I and II of the inclosed problem. If your facility can furnish useful flow charts (for any computer) or "canned" 705 routines for any of the following procedures, details would be greatly appreciated:

(1) A curve fitting routine which preferably fits equations of the type ae^{bt} to observed data.

(2) A routine which finds the Laplace transformation of a given equation, or preferably a routine which finds the Laplace transformation of a given set of sequentially arranged input data to which no equation has been fitted.

(3) A routine which finds the determinant or the inverse of a matrix, the elements of which are the ratios of two polynomials in s , where s is the differential operator. This routine appears to be the real potential bottleneck in this program since transcendental functions of s , which frequently appear in Laplace transforms of various functions, would be extremely difficult to handle unless expanded into polynomial form. But any such expansion used would have to be one which converged rapidly for large values of s in order to maintain accuracy.

(4) A routine which finds the inverse Laplace transformation of any function of s .

(5) A routine which evaluates, for some given interval of the independent variable, time, any function of time which might have been found as an inverse Laplace transformation.

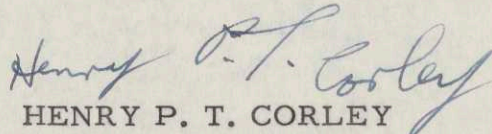
(6) Of course, a complete routine incorporating all of the foregoing into a single program.

In addition to the above, we would be extremely thankful if we could obtain theoretical approaches, hints, discussions and/or references to assist in handling (for computer programming purposes) any or all of Cases III through XII of the inclosed described problem. The non-linear Cases VII through XII are intended to include systems of ordinary linear differential equations with variable coefficients.

It appears that successful use of the inclosed described program could have the effect of very greatly speeding up many kinds of research in this country if it were made universally available.

The above described information is requested only if it can be obtained at no expense to the Air Force.

Very truly yours,



HENRY P. T. CORLEY
Captain, USAF
Chief, Research and Analysis Branch
Assistant for Data Processing
Comptroller

1 Incl
Discussion of General
Data Reduction Routine

DISCUSSION OF GENERAL DATA REDUCTION ROUTINE

The following type of problem is encountered so frequently in almost all fields of research that it is considered worthy of special attention in order that automatic computer procedures be developed for the rapid solution of said problem.

Problem Statement

Given some dynamic system - physical, logistical, economic, biological or otherwise - with much historical data available concerning the inputs and outputs of the system, it is desired to find a system of differential equations which adequately describe the relationship between a particular output variable and each input variable.

It is assumed that the system can be represented in block diagram form as shown in Figure I (at least for the linear cases) where the input variables appear on the left (e.g. $F_1(t)$, $F_2(t)$, etc.), the transfer functions in differential operator form appear in the middle (e.g. $G_1(s)$, $G_2(s)$ etc.) and the output variable, $x(t)$, appears on the right. The end objective of the problem is to determine the transfer functions ($G_1(s)$, $G_2(s)$, etc.) relating the input variables to the output variable. All variables would generally be expected to be functions of time.

Observations of input and output variables recorded simultaneously are indicated by having identical numbers for the second digits of the subscripts of the input variables and by the subscript of the output variable. Thus, the set of variables used for the third observation of a system would appear: $F_{13}(t)$ for one input variable; $F_{23}(t)$ for some other input variable; $F_{33}(t)$ for a still different input variable etc. and $x_3(t)$ for the output variable. (See Page 3, Case I)

The following distinct cases of this problem are mentioned in order that each can be considered separately.

CASE I

The system is assumed to be capable of description by a system of ordinary linear differential equations with constant coefficients. All input variables, initial conditions, and the output variable are zero for $T < 0$. The number of observations equals the number of input variables.

CASE II

Same as Case I except that the number of observations is greater than the number of input variables.

CASE III

Same as Case I except that the number of observations is less than the number of input variables.

CASE IV

Same as Case I except that the initial conditions are not known and the values of the variables are not known for $t < 0$.

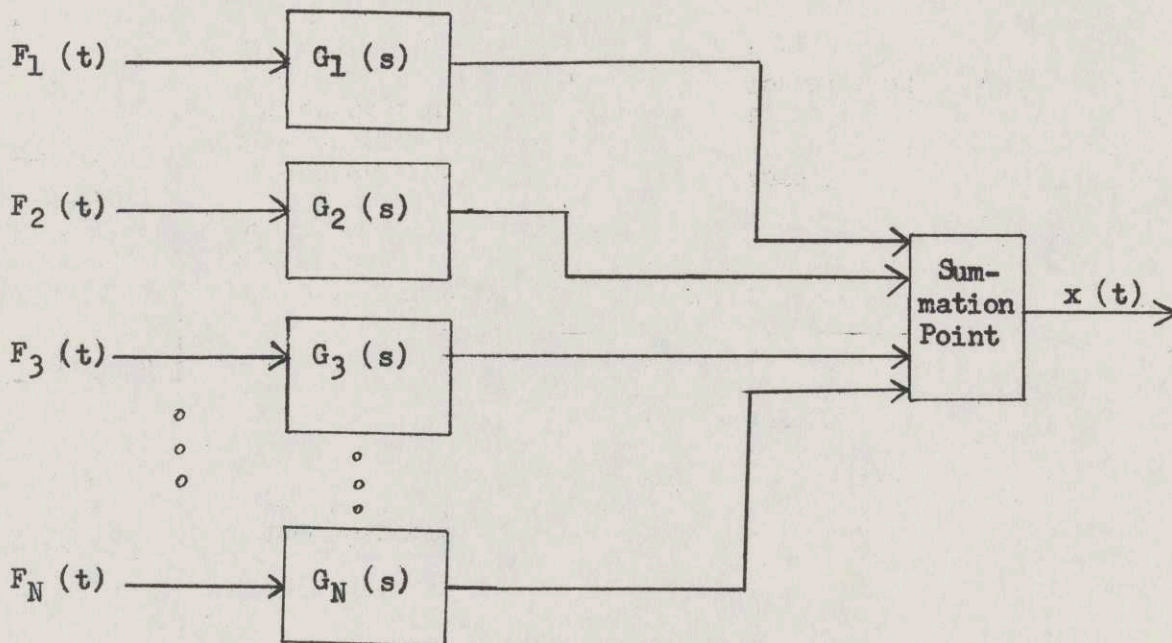
CASE V

Same as Case II except that initial conditions are unknown.

CASE VI

Same as Case III except that initial conditions are unknown.

Cases VII through XII are respectively the same as Cases I through VI except that one or more of the transfer functions is non-linear or one or more of the transfer functions is representative of an ordinary linear differential equation with variable coefficients, where such coefficients are functions of one or more of the input variables.



N is the number of input variables.
 $x(t)$ is the output variable

Figure I.

Approaches to Case Solutions

CASE I

For this case, the following equations can be written:

$$\begin{aligned}
 L F_{11}(t) G_1(s) + L F_{21}(t) G_2(s) + \dots + L F_{N1}(t) G_N(s) &= L x_1(t) \\
 L F_{12}(t) G_1(s) + L F_{22}(t) G_2(s) + \dots + L F_{N2}(t) G_N(s) &= L x_2(t) \\
 &\vdots \\
 L F_{1N}(t) G_1(s) + L F_{2N}(t) G_2(s) + \dots + L F_{NN}(t) G_N(s) &= L x_N(t)
 \end{aligned}$$

The solution of this case for any particular transfer function can be theoretically found by suitable application of matrix algebra. For example:

$$G_2(s) = \frac{
 \begin{vmatrix}
 L F_{11}(t) & L x_1(t) & \dots & L F_{N1}(t) \\
 L F_{12}(t) & L x_2(t) & & L F_{N2}(t) \\
 \vdots & \vdots & & \vdots \\
 L F_{1N}(t) & L x_N(t) & & L F_{NN}(t)
 \end{vmatrix}
 }{
 \begin{vmatrix}
 L F_{11}(t) & L F_{21}(t) & \dots & L F_{N1}(t) \\
 L F_{12}(t) & L F_{22}(t) & \dots & L F_{N2}(t) \\
 \vdots & \vdots & & \vdots \\
 L F_{1N}(t) & L F_{2N}(t) & \dots & L F_{NN}(t)
 \end{vmatrix}
 }$$

The symbol, L, is used above to indicate the Laplace transformation of a function.

Theoretically this case can be programmed for automatic solution by a large scale digital computer.

CASE II

This case can be solved exactly as Case I. In addition, the solution can be repeated using different observations in order that transfer functions already found can be verified. If many slightly different values were found for the same transfer function, they might be "averaged" in order to find the most representative one. No rigorous mathematic justification for such a procedure is known to the author, however.

CASE III

Perhaps some statistical method may be devised for finding the most probable transfer functions for this case.

CASE IV

One way to attack this problem would be to proceed just as in Case I. If the time constants appearing in the transfer functions thus determined were short compared with the length of time of the particular observations used, then it might be concluded that these transfer functions were fairly reliable since the effect of the input variables for $t < 0$ could not be very considerable in the absence of large time constants in the transfer functions. Much more theoretical background information is needed before attacking this program.

CASE V

A combination of the approaches of Cases II and IV appears feasible here.

CASE VI

Again some statistical approach might be useful.

CASES VII through XII

Perhaps some converging trial and error procedure could be devised incorporating appropriate applications of statistical multiple correlation and Laplace transform routines. No general, proven, straightforward method is known to the author for any of the Cases, III through XII, as described above.

Uses

In general, all of the cases described above would be applicable to the same problem areas. However, some types of systems could be expected to be more non-linear than others. Certainly no actual systems would be perfectly linear.

Certain general uses immediately come to mind for applying a general purpose data reduction system.

In the study of economic and logistics systems, the basic underlying relationships might be quickly found. Such systems could then be studied more thoroughly by simulation using suitable digital or analog computers.

General equations underlying chemical reactions might be uncovered so that tailor-made chemical compounds might be designed mathematically with tremendous savings in time and expense.

A very promising application of the above problem solution would be to find differential equations peculiar to a certain locality with which the weather could be more accurately predicted, utilizing input data from surrounding reporting stations.

And finally (and inevitably), someone would certainly try to utilize this approach for "playing the stock market".

UNIVERSITY OF PENNSYLVANIA

MOORE SCHOOL OF ELECTRICAL ENGINEERING

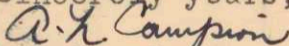
200 S. 33rd Street, Phila. 4

3/3/58

Dear Miss Dewsnap:

Thank you very much for the loan of Professor Wiener's manuscript -r mimeographed copy of the lecture notes. We will take good care of them and try to return within a fortnight, by registered mail.

Sincerely yours,



(Miss) A.L. Campion



THIS SIDE OF CARD IS FOR ADDRESS

Miss Alice R. Dowsnap
Secretary to Professor N. Wiener
Massachusetts Inst. of Technology
Cambridge 39, Mass.

March 4, 1958

Professor E. Breitenberger
Department of Physics
University of Malaya
Singapore 10, Malaya

Dear Professor Breitenberger:

I shall be very glad to send you a reprint of certain lectures of mine that seem to be relevant to what you are doing as soon as they have been reduced to hectograph form, which will be in the near future. Then I think we can raise again some of the issues which you bring up.

Sincerely yours,

Norbert Wiener

NW:AD

March 4, 1958

Mr. Peter G. Bergmann
Department of Physics
102 Steele Hall
Syracuse University
Syracuse 10, New York

Dear Mr. Bergmann:

I am afraid that I cannot write ad hoc exhortations concerning what should be done in the present educational situation. Quite frankly I think too much is made of big names in the modern world, and that too many attempts are being made to call on them for their opinions and for special jobs of writing in season and out of season. The decisions as to your policy must be made by your own people, and I am very greatly afraid that this calling in of a large outside jury of known names represents little but an attempt to pass the buck. I have the highest respect for decisions that you make yourself, even if they may be wrong, but the quasi-democratic process of calling in a considerable outside public so that you may make decisions on their say-so is subject to the interpretation that you people are willing to make decisions for yourselves and take responsibility for them.

Once these decisions are made and the responsibility is fairly where it belongs, I may or may not be interested in further cooperation, but I have not the energy at my age to keep on shooting arrows into the air.

Sincerely yours,

Norbert Wiener

NW:AD

March 4, 1958

Professor Dr. A. Kawaguchi
Department of Mathematics
Hokkaido University
Sapporo, Japan

Dear Professor Kawaguchi:

I have the most pleasant remembrances of
my stay in Hokkaido.

In all probability I shall be at M.I.T.
during the third week in June and shall be glad to
see you here.

Please remember me to my Hokkaido friends.

Sincerely yours,

Norbert Wiener

NW:AD

DIVISION OF INDUSTRIAL AND ENGINEERING CHEMISTRY

AMERICAN CHEMICAL SOCIETY

EX-CHAIRMAN

E. L. d'OUVILLE
Standard Oil Company (Indiana)
1657 Standard Oil Building
910 South Michigan Avenue
Chicago 80, Illinois



TREASURER

G. R. SEAVY
M. J. Seavy and Sons
30 Church Street
New York 7, New York

~~CHAIRMAN~~
D. O. MYATT

SECRETARY
O. H. YORK
Otto H. York Company
6 Central Avenue
West Orange, New Jersey

ASS'T. SECRETARY
BRAGE GOLDING

c/o Atlantic Research Corp.
Alexandria, Virginia

March 5, 1958

Executive Committee

C. M. COOPER
P. W. CORNELL
LEO FRIEND
W. J. MURPHY
R. L. PIGFORD
J. STEWART

Chemical Management Subdivision

Chairman R. L. HERSHEY
Chairman-Designate . . . E. P. STEVENSON

Steering Committee

R. H. BOUNDY
M. F. FOGLER
S. C. MOODY
R. B. SEMPLE

Chemical Processes Subdivision

Chairman D. F. OTHMER
Chairman-Designate . . . A. B. METZNER
Secretary N. PLATZER

Steering Committee

A. S. BRUNJES
J. M. CHURCH
T. F. DOUMANI
C. H. HAMBLET

Fluorine Chemistry Subdivision

Chairman W. T. MILLER
Chairman-Designate . . . G. L. McCOY
Secretary F. J. HONN

Steering Committee

T. J. BRICE
W. H. PEARLSON
P. TARRANT
J. K. WOLFE

Nuclear Technology Subdivision

Chairman S. LAWROSKI
Chairman-Designate . . . F. L. CULLER, JR.
Secretary H. J. OGORZALY

Steering Committee

D. H. AHMANN
F. W. CRAWFORD
I. M. CURRIE

Committees

Chemical Engineering Symposia

Chairman R. L. PIGFORD
H. D. EVANS
A. N. HIXSON
E. F. JOHNSON
J. F. SKELLY
R. E. TREYBAL
E. F. VON WETTBERG

Membership

Chairman C. S. CARLSON

Councilors

J. M. CHURCH
W. A. PARDEE

Alternate Councilors

C. J. KRISTER
J. H. RUSHTON

Professor Norbert Wiener
Department of Mathematics
Massachusetts Institute of Technology
Cambridge 38, Massachusetts

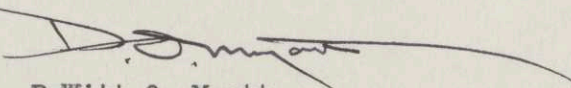
Dear Professor Wiener:

The Division of Industrial and Engineering Chemistry would be honored to have you as our Golden Anniversary Lecturer on the subject: "Mathematics and Computers - Prologue to Automation".

I will call you after you have had a little time to read the attached "prospectus" and determine your interest in participating. The date set for the presentation is Wednesday, September 10th. You are the first choice of our committee and I hope you will accept.

We are hopeful that the lectures can make a significant contribution to the thinking and future activities of the applied scientists and technologists to whom they are addressed.

Sincerely,


DeWitt O. Myatt
Chairman, 1958
Division of I&EC

DOM:ith

cc. O. H. York
E. L. d'Ouille
W. J. Murphy

Enclosure: Prospectus of Golden Anniversary Lectures

*Mar 12
Prof. Wiener talked to
these people on telephone
and said he would not
be able to attend.*

GOLDEN ANNIVERSARY LECTURES

Division of Industrial & Engineering Chemistry, American Chemical Society
134th National Meeting, September 7-12, 1958, Chicago, Illinois

PROSPECTUS

In a sense, the common theme of the Golden Anniversary Lectures might best be expressed as "what is past, is prologue". We hope to develop in this series of invited lectures the challenge for early technological application now present in our research knowledge. The period of application on which we wish to focus is the next ten years, since we are addressing ourselves primarily to developers.

For several reasons, it is felt that such a theme is most appropriate for a fiftieth anniversary symposium of the Division of Industrial and Engineering Chemistry. First, industrial chemistry is rooted in the discoveries of the research laboratory, probably more so than any other industrial field. It is almost inevitable that the seeds of the great industrial chemical achievements of the next decade are present today in the form of research knowledge. Secondly, imaginative examination of contemporary research should prove a most effective stimulus to those interested in useful application and future technical development. Finally, it seems most appropriate to make public acknowledgement of the great debt industrial chemists and technologists owe to the research laboratory as the well-spring from which they derive their strength.

We are inviting as the speakers best qualified to develop this theme persons broadly as well as deeply conversant with the research field involved, who are aware also of its potential practical applications.

The primary audience for these lectures is the group attending the oral presentation at the Chicago meeting. The primary objective of the symposium is the orientation and stimulation of this group. In view of the large scope of each lecture, forty-five minutes will be provided each speaker for his formal presentation. Audience participation and contribution is expected and desired and will be provided for by 15-minute discussion periods following each presentation.

While future publication is a matter to be decided by the ACS editors, papers that successfully fulfil the objectives of the meeting program are expected to prove of publication interest.

The topics of the six Golden Anniversary Lectures are:

Nuclear, Atomic, and Molecular Reaction - Prologue to New Chemicals

The Nature of Matter - Prologue to Materials and Fabrication

Energy Sources - Prologue of Engineering Economics

Measurement and Instrumentation - Prologue to Process Design and Control

Mathematics and Computers - Prologue to Automation

The Technical Man - Prologue of Technological Exploitation

DeWitt O. Myatt
Chairman
I&EC Golden Anniversary Symposium

c/o Atlantic Research Corporation
Alexandria, Virginia

DOM:ith
12-16-57

NEW YORK UNIVERSITY
INSTITUTE OF MATHEMATICAL SCIENCES

25 WAVERLY PLACE, NEW YORK 3, N.Y.

March 6, 1958

TELEPHONE: OREGON 4-0734

Professor Norbert Wiener
Mass. Institute of Technology
Cambridge 38, Mass.

Dear Professor Wiener:

The Committee on Scientific Conferences (Division of Mathematics) of the National Research Council has proposed that a small conference on the Mathematics of Quantum Theory, sponsored by the Council, be held sometime in 1958.

On behalf of the organizing committee, consisting of Bargmann, McShane, Segal, and myself as chairman, I should like to ask you whether you would be willing to participate in this conference.

The idea of the conference is to bring a number of mathematicians - already more or less informed on mathematical questions of quantum field theory - together with a number of physicists who are willing to tell them about the physical principles and the basic mathematical framework of this theory. The idea of the conference is not to provide an opportunity for presenting recent results. We rather think that three or four physicists - and one or two mathematicians - should give introductory lectures as a basis for informal discussions. Such a contact will certainly be very stimulating for the mathematicians present and - we hope - also for the physicists who participate.

Dyson, Van Hove and Wightman are willing to give the three introductory lectures. Wigner, Haag, and a number of other physicists will be present. Among the mathematicians Mackey will give a talk. Among others who have been asked to participate - in addition to the members of the committee - I mention M. Stone, J. Schwartz, Taub, Kadison, and Friedman. Segal and Schiffer unfortunately will not be able to attend.

Prof. N. Wiener

- 2 -

March 6, 1958

I do not know whether you have taken an interest in the quantum theory of fields specifically. However, because integration of functionals plays a certain role in the quantum theory of fields and because of your interest in, and contribution to, the quantum theory in general we thought you might like to participate in this conference.

The number of participants will be about twenty. The conference will be held in the first week in June at the Ram's Head Inn on Shelter Island, Long Island, New York. This place is rather attractive for such a gathering.

Subsistence and travel expenses within the United States will be borne by the N.R.C., provided no other travel funds (from contracts, e.g.) could be used.

I should appreciate an early reply.

Very sincerely yours,

K. O. Friedrichs

K. O. Friedrichs

KOF:la

[ans 3/16/58]

ASSOCIATION INTERNATIONALE
DE
CYBERNETIQUE
A. S. B. L.

NAMUR, LE 6 mars 1958.

Secrétariat permanent - Secretaryship

13, RUE BASSE MARCELLE

NAMUR (BELGIQUE)

TEL. 279.81 - 279.82

N° 2989 JL/AL.

Cher Monsieur Wiener,

M. Richard Rimbach, Directeur de l'Instruments Publishing Co., Inc., à Pittsburgh, et organisateur de la "Fourth International Automation Exposition" (New York, Coliseum, June 9-13, 1958) a offert à l'Association Internationale de Cybernétique de participer officiellement au Congrès de l'Automation (Fourth International Automation Congress) qui se tiendra à New York, du 9 au 13 juin 1958, à l'occasion de l'Exposition sus-mentionnée.

Une session technique (Technical Session) sera réservée à notre Association. Cette session sera intitulée "Contribution of Cybernetics to Automation". Elle comportera trois exposés qui devront traiter des apports de la Cybernétique à l'Automation ainsi que, d'une manière plus générale, des analogies vie-machine susceptibles d'intéresser l'ingénieur.

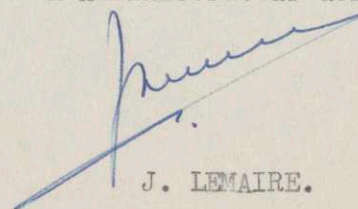
M. Boulanger et moi-même souhaiterions vivement que vous puissiez participer à cette manifestation et y représenter l'Association Internationale de Cybernétique, en tant que conférencier.

Par même courrier, je sollicite également MM. John Diebold, Louis Couffignal et Grey Walter.

Si vous estimiez pouvoir nous apporter le concours que nous vous demandons, vous m'obligeriez en m'en faisant part au plus tôt.

Veillez croire, cher Monsieur Wiener, en l'assurance de mes sentiments les meilleurs.

L'Administrateur-délégué,



J. LEMAIRE.

Monsieur Norbert WIENER
53, Cedar Road

BELMONT.

ASSOCIATION INTERNATIONALE
DE
CYBERNETIQUE

A. S. B. L.

Secrétariat permanent - Secretaryship

13. RUE BASSE MARCELLE

NAMUR (BELGIQUE)

TEL. 279.81 - 279.82

N° 8194 PB/AL.

NAMUR, LE 13 mars 1958.

Cher Monsieur Wiener,

M. Boulanger me charge d'accuser réception de votre lettre du 11 février et de vous dire combien nous regrettons qu'il ne vous soit pas possible d'accepter la Présidence Générale du 2e Congrès International de Cybernétique.

J'ai reçu le texte de l'article que vous avez bien voulu nous fournir pour la revue "Cybernetica" et je vous en remercie vivement. Ce texte sera inséré dans le premier numéro de la revue qui paraîtra en avril de cette année.

Veillez croire, cher Monsieur Wiener, en l'assurance de mes sentiments les meilleurs.

p. L'Administrateur-délégué,


J. LEMAIRE.

Monsieur Norbert WIENER
Massachusetts Institute of Technology
C A M B R I D G E.

[ans 3/28/58]

THE LONDON MATHEMATICAL SOCIETY.

BURLINGTON HOUSE,
PICCADILLY,
LONDON, W.1.

6. 3. 58

DEAR SIR,

I have to inform you that the undermentioned sum is due from you in respect of your subscription to the Society:—

	£	s.	d.
Arrears at 1. 11. 5		:	:
Subscription 1957/8	2	: 2	: 6
Amount outstanding	£ 2	: 2	: 0

I shall be obliged to you if you will kindly send me your remittance for the balance due.

I am,

Yours faithfully,

S. Stowell

Dr Herbert Wiener,

Treasurer.

[ans 4/23/58]

March 6, 1958

Messrs. Fisher, Knight & Co., Ltd.,
Gainsborough Press,
St. Albans,
Herts,
England

Gentlemen:

I am returning herewith proof sheet on Nature
Corres. No. 951 on which there are no corrections. Will
you kindly send me 50 reprints, for which you will find
check enclosed in the amount of One Pound Twelve Shillings
Three Pence Sterling.

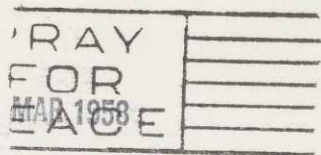
Very truly yours,

Norbert Wiener

NW:AD
Enc.

[ans 3/11/58]

AMBER & AMBER
CONSULTING ENGINEERS
19925 SCHAEFER HIGHWAY
DETROIT 35, MICHIGAN



Dear Dr. Wemert:

Your work has been, and continues to be, a great inspiration to me. My reference to your work appears on page 6.32 of the new Ronald Press Co. PRODUCTION HANDBOOK.

Cordially

George H. Amber



Dr. Norbert Weiner
MIT
Cambridge, Mass.



The New Republic

1244 19TH STREET, NW WASHINGTON 6, D.C.

Robert Evett, BOOK EDITOR

March 7, 1958

Prof. Norbert Wiener, Ph.D.
Department of Mathematics
Massachusetts Institute of Technology
Cambridge, Massachusetts

Dear Dr. Wiener:

Have you already seen a copy of John von Neumann's "The Computer and the Brain"? Naturally it would make me very happy if you would agree to write a piece for us using the book as a point of departure. Please let me know if you would be interested in doing this.

With best wishes,

Sincerely yours,

Robert Evett

RE:cg

NEW YORK UNIVERSITY
INSTITUTE OF MATHEMATICAL SCIENCES

25 WAVERLY PLACE, NEW YORK 3, N.Y.

March 7, 1958

TELEPHONE: OREGON 4-0734

Professor Norbert Wiener
Mass, Institute of Technology
Cambridge, Mass.

Dear Professor Wiener:

After returning from my visit to Cambridge, I have tried to locate in your papers the statements you made to me which are closely related to the second result of Shapiro and myself. I think I found them in PALEY-WIENER, pp. 164-165.

Since the conceptual framework, in which we formulated our results, differs from yours, we did originally not realize the close relationship and we are trying now to understand this relationship more precisely.

Shapiro and I, of course, have been stimulated and decisively influenced by your pioneering work in this field.

Sincerely yours,

K. O. Friedrichs

K. O. Friedrichs

KOF:la

PUBLISHER

The Year Book Publishers, Inc. · Chicago 11, Illinois

→ *medical physics*

OTTO GLASSER, Ph.D., EDITOR-IN-CHIEF

Cleveland Clinic Foundation · 2040 East 93rd Street · Cleveland 6, Ohio

7 March, 1958

Dr. Norbert Wiener
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

Dear Dr. Wiener:

Because of the enthusiastic reception enjoyed by Volumes I and II of MEDICAL PHYSICS, the Year Book Publishers have asked me to edit Volume III. They have suggested that this new volume be published within the next eighteen months. It is, therefore, important at this time to give careful thought to desirable changes in the organization of the new edition, as well as to alterations in individual articles and addition of new material. Further, it is my thought, and that of the publisher, that Volume III should be a book of about 600 pages. This means that each article on a subject published previously in MEDICAL PHYSICS will be about two pages, and on a new topic three pages, in length (approximately 950 words per page), and will constitute a summary of advances in medical physics from 1950 to the present.

It is of utmost importance that the authority and practicality of MEDICAL PHYSICS be maintained. Your contributions in your field have been outstanding and it is my pleasure to invite you to prepare a summary article on "Analysis of Fine Structure in Alpha Rhythm from Electroencephalograms" or on any other subject of your choice suitable for publication in MEDICAL PHYSICS III. Because each author's article will be relatively brief, we are asking that all contributions be in my hands by July 1, 1958. The Year Book Publishers will reimburse each author at the customary rate of \$5.00 per printed page for his material.

It is my sincere hope that you will be able to cooperate in this effort, and the publishers join me in assuring you our complete cooperation.

I shall look forward to hearing from you soon.

Sincerely,



Otto Glasser, Ph.D.
Head, Biophysics

OG:kds



[ans 3/7/58]

MAR 10 1958

MEMORANDUM TO CONTRIBUTORS TO MEDICAL PHYSICS

General Notes Regarding the Third Volume:

In accomplishing this new volume of Medical Physics, it is our aim to contain the material in a volume not to exceed 600 pages. This clearly indicates that each article on a subject previously published in Medical Physics should not be more than 2 pages, and on a new topic 3 pages, in length (950 words/page), including illustrations and bibliography. It is asked that you kindly limit your bibliography to a few key references.

Volume II was published late in 1949. Volume III is being planned for 1959. A brief 2-page article reviewing your subject should bring the reader up to date with advances in your field. Wherever possible, it is desirable that specific data be set forth in tables which are easily followed.

It would be desirable, if possible, to integrate your tabular material with that given in the Chemical Handbook, the Handbook of Physics, and the Handbook of Biological Data.

It is most desirable that the material contributed by the physicists be understood by the medical men, and that that contributed by physicians be intelligible to the physicists. The keynote of the writing should be clarity and simplicity, with each subject developed as concisely and succinctly as possible.

The publisher will reimburse each contributor at the customary rate of \$5.00 per printed page for his contribution.

Manuscripts are due July 1, 1958.

Mechanical Preparation of the Manuscript:

A. Typing. -- All material, including bibliographies, should be typed double space on standard, 8 1/2 x 11 in. bond paper, with at least 1 in. margins on all four sides.

B. Headings. -- Indicate values of all centered and side headings in descending order of importance as 1, 2, 3, etc., written on the manuscript in pencil, according to the example:

① Effectiveness of Light

② Footcandle Scale of Effectiveness. -- It is apparent (Fig. 17) that illumination must be increased in geometric steps

It is desirable that the number of such headings be kept to a minimum compatible with satisfactory presentation of the material.

C. References and Bibliography (typed double spaced). -- Abbreviations for all journal references should follow the style of the Cumulative Index Medicus, and the material presented in the following forms:

Journal -- Doe, J. B., Smith, R. D., and Jones, A. D.: Experiences with ventriculography, Am. J. M. Sc. 59:843, 1951.

Book -- Doe, J. B. (ed.): Treatment of Fractures (New York: Jones Scientific Publishing Company, 1950).

References should be numbered consecutively throughout the manuscript and listed alphabetically (author) with the corresponding number at the end of the text. At the point in the text where reference to a publication appears, add the author's name in parentheses with the reference number. If there are to be no references in the text to bibliographic material, the reading list (Bibliography) will appear unnumbered at the end of the text, in alphabetical order.

D. Tables. -- Tables should be numbered consecutively throughout the manuscript. Each table should be submitted on a separate page, inserted in the manuscript as the page following that on which it should appear.

E. Editorial Revision. -- Some editorial changes may be necessary in order to produce a homogeneous whole, with style for spelling, capitalization, abbreviation, etc., adjusted to achieve consistency throughout the volume. If any extensive revisions are undertaken entailing reorganization of material or extensive cutting, the manuscript will be submitted to the author for approval before publication.

Preparation of Illustrations:

A. Photographs. -- All prints should be glossy and should be 5 x 7 inches. They should be carefully inspected by the author to make certain that they show all essential details embodied in the negative. The author should be sure that the prints submitted are free from cracks or other blemishes. Photos which show apparatus, instruments and persons should be properly retouched if necessary.

B. Drawings and Charts. -- These illustrations should be line drawings. They should be made 50 per cent larger than they are to appear in the book, and after reduction should fit within the maximum dimension of either a single column (3 inches) or a double column (6 inches). The lettering should be clear in sans serif style about the height of a capital letter on an elite typewriter. If it is not possible to have a competent artist do this work in finished form (in India ink on drawing board), rough copies on squared paper may be submitted for reproduction by our illustrator. All illustrations should be submitted unmounted, with the figure number corresponding to that mentioned in the text and in the legends, indicated on the back.

Editor: MILTON HOWARD

Managing Editor: CHARLES HUMBOLDT



Mainstream

832 Broadway, New York 3, N. Y.

Telephone: GRamercy 3-5145

March 7, 1958

Dr. Norbert Wiener
Massachusetts Institute of Technology
Cambridge, Massachusetts

Dear Dr. Wiener:

I have read an address delivered by you on the occasion of Wabash College's 125th anniversary. Immediately after reading it I got in touch with Dr. Stephen Fritchman, in Los Angeles, since he had quoted from it in a sermon of his. I asked him whether he thought that we might publish it and he urged me to write to you directly. I am doing that now.

As you may or may not know, we are a Left-wing progressive magazine and so you may wish to think twice about appearing in our pages. If this should be a matter of concern to you, we can ask the College itself for permission to reprint the address, since they have issued a mimeographed copy of it and so I imagine it more or less becomes public property.* In any case, you may wish to see a copy or two of MAINSTREAM and I shall be glad to send these to you.

Most cordially,

Charles Humboldt

Charles Humboldt
Editor

CH:MB

209

P.S. I should have said that if you don't want us to reprint at all, we will of course respect your wish. In that event, you're only to let us know. C.H.

[over 3/10/58]

THE AMERICAN MUSEUM OF NATURAL HISTORY
CENTRAL PARK WEST AT 79th STREET
NEW YORK 24, N. Y.

March 7, 1958

Professor Norbert Wiener
Department of Mathematics
Massachusetts Institute of Technology
Cambridge 39, Mass.

Dear Norbert:

I would refer the inquiry you received to Mr. Gregory Bateson, Veterans Administration Hospital, Palo Alto, California, and Professor Ray Birdwhistell, Department of Anthropology, University of Buffalo, and also to a very interesting young Japanese, Magoroh Maruyama, c/o Wilhelmsson, Tomegapsgatan 15, Lund, Sweden.

With warm regards,

Sincerely yours,



SV Margaret Mead

1

MM:ns

[Ans 3/13/58]

THE UNIVERSITY OF CHICAGO

CHICAGO 37 • ILLINOIS

DEPARTMENT OF SOCIOLOGY

1126 EAST 59TH STREET

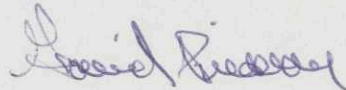
March 7, 1958

Professor Norbert Wiener
Massachusetts Institute
of Technology
Cambridge 39, Massachusetts

Dear Norbert Wiener:

Your daughter, Mrs. Blake, called up the other day and said she was going to bring your novel over but it has not come. Since I haven't got her address here, I am writing you to check on it.

Cordially,



David Riesman

DR/c

INDIAN ROCK FARM



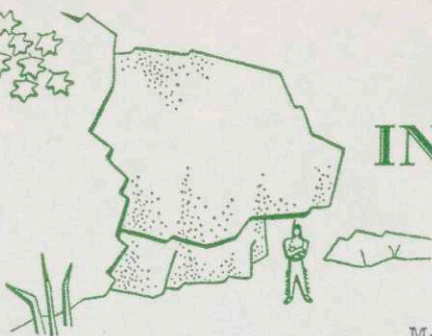
ASHLEY FALLS,
Massachusetts



CANAAN, CONN.
(Berkshire Branch,
NEW HAVEN R. R.)



SHEFFIELD, 9-8718
Massachusetts



March 10, 1958

Professor Norbert Wiener
M.I.T., Cambridge
Massachusetts

Dear Professor Wiener:-

I have much to thank you for in "I Am a Mathematician" which I read when it first came out in 1956 and which I have referred to often since. And, of course, since you have made me feel I know you, I keep having your name jump out at me from many hidings - most recently on page 249 of William Beck: "Modern Science and the Nature of Life" - "the basic nature of control processes has been examined in recent years under the leadership of Norbert Wiener."

What, sir, I would like to ask about now is what has been fashioned with the "mathematical tools" which you created for the reading of the irregular oscillations of brain waves? This work, you said in 1955, "is now under way as a joint undertaking in which scientists from M.I.T. and the Massachusetts General Hospital collaborate." Page 320 of "I Am a Mathematician".

What I am specifically curious about is whether or not, among this Hospital's patients, any recordings have been made which show differences caused by alcohol. This comes back to you again, on page 268, where you explain that nerve fibres are not only "switching devices" but devices which lead into other switching devices at "synapses". It is all very well to assume that alcohol destroys some of the thresholds of these synaptic ~~threshold~~ systems in the brain - (which would account for some of the subsequent erratic behavior of a drinker) - and something else again to prove it! If alpha rhythm, however, shows changes --

Has anything been published on this subject which you could direct me to - or do you, or the hospital, have any analyses you could send me? I work as a writer in many fields and I do not like to invent guesses in any field where facts are available. The facts stand up in print; the guesses, "intelligent" or not, often fall embarrassingly on their faces!

Yours sincerely,

Gelston Hardy
Gelston Hardy

[ans 3/13/58]

March 10, 1958

Captain Henry P. T. Corley
Chief, Research and Analysis Branch
Oklahoma City Air Material Area
United States Air Force
Tinker Air Force Base, Oklahoma

Re: OCCLA

My dear Captain Corley:

This is to comment on your letter of of the 4th of March.

(1) Regarding the curve fitting routine to fit equations of the type ae^{bt} to observed data, this problem can be solved by plotting the logarithm of the function given in the equation against the time and passing the best straight line through to the given points. This is a routine problem of least squares and offers no difficulty.

(2) The problem of finding the Laplace transformation of a given equation can be solved by a logarithmic change in base and then by means of a Fourier transformer routine. I am now writing this up for you.

(3) I would like more information as to just what you want. It seems to me that such problems are best solved by a Fourier transformation of the matrix in question and then by a purely algebra formulation. If you can be more specific I shall be glad to look into the matter.

(4) and (5) belong closely together with (2) and in the course of the next few weeks I shall write them up for you. I have no assistance for computation, nor am I willing to spend my time on it unless the Air Force can procure proper assistance for me in reducing this to a form satisfactory to you. This does not involve any compensation for myself, but it does involve the Air Force assuming any subsidiary expenses to which I would be forced to put myself in procuring assistance.

Sincerely yours,

NW:AD

Norbert Wiener

March 10, 1958

Mr. Robert Evett,
The New Republic
1244 19th Street, NW
Washington 6, D. C.

Dear Mr. Evett:

A few weeks ago an article was solicited from me by your magazine on the question: who speaks for the scientists? I sent an article which went as far as I could go in this matter on what I consider to be a high plane, avoiding Washington gossip which I am not thoroughly in touch with and which I do not care to be mixed up in. This article was retained for several weeks without any notice of its receipt, and finally rejected. Under the circumstances I realize the great gap between having an article solicited by your periodical and having it published in your periodical. You will, therefore, understand that I am not available for further contributions.

Sincerely yours,

Norbert Wiener

NW:AD

March 10, 1958

Professor K. O. Friedrichs
New York University
Institute of Mathematical Sciences
25 Waverly Place,
New York 3, New York

Dear Professor Friedrichs:

Many thanks for your letter of March 7th.

As for your earlier letter, I believe I will be able to be at the meeting and have a great deal of new material which I shall present there. Meanwhile, in a few weeks I shall have a manuscript ready on your functions and their applications to electrical engineering of which I shall send you a hectograph copy.

Very sincerely yours,

Norbert Wiener

NW:AD

[ma 3/27/58]

March 10, 1958

Dr. Otto Glasser, Editor-In-Chief
Medical Physics
Cleveland Clinic Foundation
2040 East 93rd Street
Cleveland 6, Ohio

Dear Dr. Glasser:

Many thanks for your letter of the 7th of
March. I shall be glad to send you an article for
Medical Physics as soon as I have written up the material.

Sincerely yours,

Norbert Wiener

NW:AD

[ans 3/14/58]

March 10, 1958

Mr. Charles Humboldt, Editor
Mainstream
832 Broadway,
New York 3, New York

Dear Mr. Humboldt:

As my article is public property, you might
as well reprint it for your publication.

Many thanks for your courteous letter.

Sincerely yours,

Norbert Wiener

NW:AD

P.S. It would be appreciated if you would advise me
before it goes to press in what context
or connection it is being quoted.

[and 3/20/58]

JOURNAL *of the* OPTICAL SOCIETY *of* AMERICA

Published by the
AMERICAN INSTITUTE OF PHYSICS
for the
OPTICAL SOCIETY OF AMERICA

WALLACE R. BRODE, *Editor*
MARY E. CORNING, *Assistant Editor*
NATIONAL BUREAU OF STANDARDS
WASHINGTON 25, D. C.

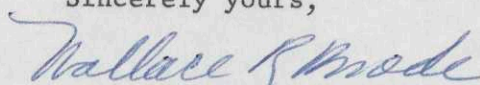
March 11, 1958

Prof. Norbert Wiener
Department of Mathematics
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

Dear Professor Wiener:

On January 16, 1958 we sent you the manuscript
"Radiative Transfer Axioms" by Rudolph W. Preisendorfer
to be reviewed for publication in the Journal of the
Optical Society of America. We would appreciate receiving
your comments as soon as convenient so we may inform the
author of the status of his paper.

Sincerely yours,



Wallace R. Brode
Editor

[ans 3/13/58]



WAYNE STATE UNIVERSITY

PRESS AND PUBLICATIONS

DETROIT 2, MICHIGAN

March 11, 1958

Dr. Norbert Wiener
Mathematics Department
Massachusetts Institute of Technology
Cambridge, Massachusetts

Dear Dr. Wiener:

Our office has been informed that you will speak at our forthcoming "Symposium on the College Professor." There is a great deal of local interest in the Symposium and the Detroit press is expected to attend. To aid us in advance publicity, we wonder if it would be possible to secure an advance copy of your remarks? If this is not possible, we wonder if you could provide us with a carbon of your talk at the time of your appearance?

Any aid that you can give us would certainly be appreciated. If you have a biographical sketch on hand, we also would appreciate a copy of it. We have already written your public relations office for a photograph.

Sincerely,

Paul J. Pentecost

Paul J. Pentecost
Assistant Director

PJP:hrr

[and 3/13/58]

JOURNAL OF MATHEMATICS AND PHYSICS
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
CAMBRIDGE 39, MASS.

March 11, 1958

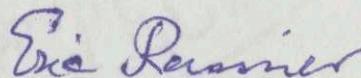
Professor Norbert Wiener
Room 2-276
M.I.T.

Dear Professor Wiener:

I am taking the liberty of enclosing with this the manuscript of a paper entitled "Generalized Sampling Theorem". This has been submitted for publication consideration to the JOURNAL OF MATHEMATICS AND PHYSICS.

Your comments on it in regard to its suitability for publication as a research paper would be very much appreciated.

Sincerely yours,



Eric Reissner
Managing Editor

ER:EMB
Enc.

Taken care of by Dr. Skulawicz

TRAVAIL ET METHODES

REVUE TECHNIQUE
DE LA DIRECTION ET
DE L'ORGANISATION
DES ENTREPRISES

ÉDITIONS SCIENCE ET INDUSTRIE, 6, AVENUE PIERRE-1^{er}-DE-SERBIE, PARIS (16^e)
S. A. CAP. 6.230.000 FR\$ - R. C. SEINE 234.446 B - C. C. P. 1302.08 PARIS - TÉL.: KLÉBER 47-71 (3 lignes)

Paris, le 11 Mars 1958

Monsieur Norbert WIENER
South Tamworth
New Hampshire

Monsieur,

Voici - enfin - sorti des presses , l'ouvrage
" LA METHODE DANS LES SCIENCES MODERNES "
auquel vous avez bien voulu collaborer.

Je m'empresse de vous adresser sous pli séparé

1^o - Un exemplaire du livre

2^o - Vingt exemplaires de votre article

ainsi qu'il en a été convenu entre nous.

Vos honoraires vous seront adressés par un prochain
courrier, à l'adresse que nous vous prions de bien vouloir
nous indiquer.

En vous renouvelant encore mes remerciements pour
votre éminente contribution à cette oeuvre commune, dont la
diffusion s'annonce sous les meilleurs auspices,

Je vous prie de croire, Monsieur, à mes sentiments
les plus distingués.

Le Rédacteur en Chef

Ch. Vora

Charles VORAZ

FISHER, KNIGHT & CO. LIMITED
GAINSBOROUGH PRESS ST. ALBANS, HERTS

No. 3218



Date as postmark

"NATURE" REPRINTS

Dear Sir,

We thank you for your order and remittance

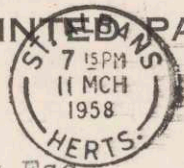
£ 1/12/13

The goods will be sent in due course.

Yours faithfully,

for FISHER, KNIGHT & CO. LTD.

PRINTED PAPER RATE



HAVE YOU
TAKEN OUT
YOUR LICENCE
FOR RADIO-TV



Norbert Wiener Esq,

Massachusetts Institute of Technology,

Dept. of Mathematics,

~~CAMBRIDGE 39,~~

CAMBRIDGE 39,

MASS. U.S.A.

March 11, 1958

Scientia
L-6300
Via Maragoni 3
Milan, ITALY

Gentlemen:

In accordance with your request, I am
enclosing herewith a Resumé of my article on
"Time and the Science of Organization".

Sincerely yours,

Norbert Wiener

NW:AD
Enc.

*Copy in folder
with other speeches.*

March 11, 1958

Dear Peggy:

Mother and I are looking forward very much to you visit. Meanwhile, I got a letter from Riesman who apparently heard from you about my manuscript but did not receive it. I am enclosing a copy of his letter. If you haven't sent it please do so, and if you have let me know.

Love,

Mrs. Margaret Blake
1405 East 57th Street,
Chicago, Illinois

ce 5 - 4900



WAYNE STATE UNIVERSITY

DETROIT 2, MICHIGAN

OFFICE OF THE VICE PRESIDENT
FOR ACADEMIC ADMINISTRATION

March 12, 1958

Professor Norbert Wiener
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

Dear Professor Wiener:

The faculty committee on The College Professor Symposium has established the following program:

Wednesday, April 16	2:30 - 3:45	Helen White
	4:00 - 5:15	Norbert Wiener
Thursday, April 17	2:30 - 3:45	Harold Taylor
	4:00 - 5:15	David Riesman
	8:00 - 10:00	Panel with the four guests.

If you have not yet heard from Vaden Miles about a colloquium with the physics, chemistry and mathematics departments you soon will. In addition, you may hear from the English Department about a late Thursday morning coffee hour for students in the humanities. And Wednesday evening is being reserved for an informal gathering of AAUP members within the State at which Helen White will preside as President of the Association. So far these are the only extra curricular requests that have come to my attention and you must, of course, feel free to say no where you wish.

You will notice that the program allows you an hour and fifteen minutes for your formal presentation on Thursday afternoon. While the Committee does not wish to suggest limitations, we made an assumption that you might want to speak for the usual fifty minutes that our culture permits the college professor. If you wish to take more time please do so. And if you will permit questions arising out of the subject of your paper, we will see that they are submitted in writing.

You will also notice that Professor Meiklejohn has had to withdraw to his regret and especially to ours. He was simply unable to prepare himself in a way that satisfied his standards.

I have reserved a room for you at the Park-Shelton Hotel which is adjacent to the campus and convenient to the down town area. If you will let me know the days of your arrival and departure, I will have the hotel send you a confirmation.

Sincerely,

James P. McCormick
Assistant to the Vice President
Academic Administration

[and 3/19/58]

JPM:jg

THE ROBERT LINDNER FOUNDATION

2 WEST 25TH STREET • BALTIMORE 18, MARYLAND

13 March 1958

FOUNDATION PRESIDENT

GERALD JOHNSON

BOARD OF TRUSTEES

Chairman

DR. BURTON R. POLLACK
10 West Madison Street
Baltimore 1, Maryland

Vice-Chairman

DR. WILLIAM ZIELONKA
1120 St. Paul Street
Baltimore 2, Maryland

Secretary

MORTON ABRAHAMS
22 South Hanover Street
Baltimore 3, Maryland

Treasurer

JACK ROSEN
420 South Mount Street
Baltimore 23, Maryland

DR. IRVING ABRAMSON
SIDNEY COHEN
HERMAN FISH
REV. ROBERT W. KNOX
SAMUEL LAZEROW
MRS. ROBERT LINDNER
NORMAN MAILER
PROF. WALTER MORRIS
MRS. LAWRENCE PERIN
DR. THEODOR REIK
FRED WEISGAL

PROFESSIONAL COMMITTEE

Chairman

THEODOR REIK, PH.D.
885 West End Avenue
New York 25, New York

RALPH S. BANAY, M.D.
PHILIP HARRIMAN, PH.D.
WILLIAM ZIELONKA, PH.D.

Dr. Norbert Wiener
Department of Mathematics
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

Dear Dr. Wiener:

The Robert Lindner Foundation invites you to be the Foundation's Invitational Lecturer for 1958. This lectureship is an opportunity to present those aspects of your ideas that you choose to an interested group of persons with diversified backgrounds of interest and education. The Foundation will encourage the publication of the lecture. This lecture should be presented in May in Baltimore, Maryland, at our final meeting of the season. The particular date of the meeting will be determined by your schedule. My understanding is that you are considering talking to the staff of University Hospital in this city. Perhaps the two programs could be intergrated with your addressing the general audience the evening before or after your work at the hospital.

A brief description of the Foundation is in order here for your consideration. This Foundation was begun as a tribute to Dr. Robert Lindner. The purpose is to encourage the expression of creative ideas contributing to human development thru forums, publications, and the presentation of awards. In the two years of its existance the Foundation has sponsored lectures by Drs. Theodor Reik, W. Horsley Gantt, and H. Bentley Glass. Dr. Reik's lecture series eventuated in his volume MYTH AND GUILT, and Dr. Gantt and Dr. Glass are modifying and publishing their talks in appropriate journals.

In addition to other activities, we are currently sponsoring a series of awards for creative work in the arts and sciences done by prisoners while in prison. This project, which has just begun, includes all Federal and State institutions in seven seaboard states. Enclosed is a report of our first year's work.

The Foundation would like you to consider for this occasion the presentation of developments in your thinking along any of the lines related to our mutual interests in the many facets of thinking and creativity. The theme you develop is that of your own choice. We will cooperate with you in the publication of this

Dr. Norbert Wiener
RE. Invitational Lecturer, 1958

Page 2

talk and if special printing would be appropriate the Foundation will see that such is accomplished. Your usual honorarium and all expenses will, of course, be provided.

Please let me know of your interest in this lectureship, and of any questions and points you may wish to discuss.

Very sincerely,

William Zielonka

William Zielonka, Ph. D.

WZ:APP
Enc. 1

Handwritten note in a circle: Hon. of 250 in V-20 P.

[ans 3/24/58]

March 13, 1958

Mr. Wallace R. Brode, Editor
Journal of the Optical Society of America
National Bureau of Standards
Washington 25, D. C.

Dear Mr. Brode:

I am now looking thoroughly through the Preisendorfer paper, which I regret I have held up too long. I shall forward it to you with comments very soon, and my impression I expect to be extremely favorable.

One of the reasons that I have held it up is that I have been thinking rather deeply about related fields, and my ideas have now jelled. I am applying field theory to the classical theory of gases and liquids. Now that I know the background of this, I am in much better shape to evaluate Mr. Preisendorfer's work than I was before, and I think it is only in terms of a full understanding of field theory in general that such a valuation is possible.

Please expect the manuscript within a few days.

Sincerely yours,

Norbert Wiener

NW:AD

March 13, 1958

Mr. Robert Gordon
136 Pleasant Street
Brookline, Mass.

Dear Mr. Gordon:

Professor Wiener would like to have you
stop in at his office at your earliest convenience.
If for any reason you are unable to come in would
you be good enough to telephone.

Sincerely yours,

Secretary to
Professor Norbert Wiener

March 13, 1958

Dr. Gelston Hardy
Indian Rock Farm
Ashley Falls, Mass.

Dear Dr. Hardy:

Your letter of March 10th comes in at just the right time. We have a group of electroencephalograph data with medical and psychological background concerning a number of alcoholics which is being sent in for analysis in our laboratories by Dr. Morris Chafetz. I would rather not make any preliminary comments until we have this analysis thoroughly worked out. This will be a matter of a very few weeks, and I shall let you know what the results are.

I think this meets with your request.

Sincerely yours,

Norbert Wiener

NW:AD

[ans 3/15/58]

March 13, 1958

Mr. Archer Harman, Jr., Headmaster
The Peck School
Morristown, New Jersey

Dear Mr. Harman:

Our son-in-law, Mr. Gordon Raisbeck, has acquainted us with the needs of your school, and my wife and I are very happy to send you the enclosed check as a contribution to the Building Fund.

It is a great satisfaction to us to learn that our little granddaughter, Lucy, is so happy and contented at Peck.

Sincerely yours,

Norbert Wiener

NW:AD
Enc.

March 13, 1958

Mr. Victor A. Litter
I. D. E. A.
Castelar (Buenos Aires)
F. C. N. D. F. Sarmiento
Republic of Argentina

Dear Mr. Litter:

In reply to your letter of February 13th,
I enclosing herewith copy of a letter I received
from Dr. Margaret Mead of the American Museum of
Natural History in New York, to whom I referred
your inquiry.

Sincerely yours,

Norbert Wiener

NW:AD
Enc.

March 13, 1958

Mr. Paul J. Pentecost, Assistant Director
Wayne State University
Detroit 2, Michigan

Dear Mr. Pentecost:

In answer to your letter of March 11th,
I am at present engaged in writing up my remarks on
"Symposium on the College Professor". I am about
one-fifth through now and expect to have it completed
in a very few days. A copy will be sent to you at
once.

A biographical sketch is enclosed herewith
in accordance with your request.

Sincerely yours,

Norbert Wiener

NW:AD
Enc.

PUBLISHER

The Year Book Publishers, Inc. · Chicago 11, Illinois

→ *medical physics*

OTTO GLASSER, Ph.D., EDITOR-IN-CHIEF

Cleveland Clinic Foundation · 2040 East 93rd Street · Cleveland 6, Ohio

14 March, 1958

Dr. Norbert Wiener
Department of Mathematics
Massachusetts Institute of
Technology
Cambridge 39, Mass.

Dear Dr. Wiener:

Many thanks for your kind letter of 10 March, 1958. We are very happy and honored that you will contribute an article for MEDICAL PHYSICS III. If you have any other material which is suitable for inclusion in the new volume, we would be anxious to hear about it.

Sincerely yours,
Otto Glasser
Otto Glasser

March 14 1958

Dear Professor N. Wiener

I have the honor of introducing myself to you.

I am assistant professor at mathematical department of The Tokyo Metropolitan Technical College. I had been taught by Professor S. Akahara at The Tokyo Institute of Technology. Also, your lectures in Japan contributed with my study very much. So, I am making study of applications of your prediction theory to engineering and social science.

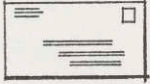
I shall be pleased if you will kindly teach me the numerical examples of prediction theory.

Yours sincerely

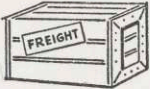
Tosio Odanaka.

[ms 3/19/58]

INDIAN ROCK FARM



ASHLEY FALLS,
Massachusetts



CANAAN, CONN.
(Berkshire Branch,
NEW HAVEN R. R.)



SHEFFIELD, 9-8718
Massachusetts



March 15, 1958

Dr. Norbert Wiener
Massachusetts Institute of Technology
Cambridge, Mass.

Dear Dr. Wiener:-

I appreciate deeply your most prompt reply to my letter of March 10th and I await eagerly the results of your findings with Dr. Chafetz concerning "a number of alcoholics."

You must, sir, however demote me right out of the ranks of doctors. I have not earned the right to your salutation: "Dear Dr. Hardy." I place high value on the compliment; but whatever claim I have on you - slight as it is - rests not on degrees but on my deep respect for your creative scholarly work.

Most sincerely yours,

Gelston Hardy
Gelston Hardy

March 16, 1958

My dear Professor Wiener:

I regret to inform you,
at the request of Mrs.
Womersley, of the death of
John R. Womersley on
March 7, 1958 in University
Hospital, Columbus, Ohio. Burial
was in Woodland Cemetery,
Dayton, Ohio, on March 11.

The Womersley home address
is 1932 Emerson Ave., Dayton 6,
Ohio.

Sincerely,

John D. Uphaus

[and 3/19/58]
SPP



Professor Norbert Wiener
Massachusetts Institute
of Technology
Cambridge, Massachusetts

3004 Forest Grove Ave.

Dayton 6, Ohio

Prof. Norbert Wiener
Department of Mathematics
Massachusetts Institute of Technology
Cambridge, Massachusetts

March 17, 1958

Dear Prof. Wiener

Would you remember of the few days which you spent in Kyushu University in Fukuoka, Japan? Indeed we could enjoy your two lectures, one for public and the other on multiple prediction theory.

I came to Princeton University by the Rockefeller Foundation Grant, and I will stay here until the end of April. In the meantime I should like to visit you and your colleagues in Department of Mathematics and ⁽ⁱⁿ⁾ Lincoln Institute and to learn on what topics they are now researching and with what ideas they are investing.

I hope my visit will not disturb you, and I shall be much obliged if you would suggest your convenient time to see me. ^(gati)
I shall be very glad to arrange my conveniences according to your suggestions.

Would you kindly convey my best regards to Mrs. Wiener with whom I had the privilege to be acquainted in Fukuoka and Tokyo.

Yours sincerely,

Tosio Kitagawa

Tosio Kitagawa
9 Chambers Terrace,
Princeton, N.J.

3:10
8144 tran
7 H. Brown Vol. 4-1995 = Nat 9036
newman - Nat 9036

[Ans 3/19/58]



ARMOUR RESEARCH FOUNDATION OF ILLINOIS INSTITUTE OF TECHNOLOGY

TECHNOLOGY CENTER · 10 WEST 35TH STREET · CHICAGO 16, ILLINOIS · CALumet 5-9600

ELECTRICAL ENGINEERING
RESEARCH DEPARTMENT
3440 SOUTH STATE STREET

March 17, 1958

Professor Norbert Wiener
Department of Mathematics
Massachusetts Institute of Technology
Cambridge, Massachusetts

Dear Professor Wiener:

In confirmation of our telephone conversation, I expect to visit you in your office on Friday, March 21, at 10:00 A.M.

We are in the process of conducting a program consisting of interviews of a selected group of approximately fifty men in various scientific and related fields. We should like to obtain your impressions of future developments that might occur in the forthcoming period of the next five to twenty years. This information will be utilized in order to construct a mass impression of present day scientific opinion on forthcoming developments in many areas.

We certainly appreciate your willingness to participate in such a program and it is with great personal pleasure that I look forward to meeting you on March 21.

Most sincerely yours,

R. B. Schulz
Research Engineer

RBS:bt

Bot Home Ave 323 396 511
7 P.M. 2.15 (INTER-DEPARTMENTAL)

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
CAMBRIDGE, MASS.

OFFICE OF

March 18, 1958

To: Professor Norbert Wiener
From: R. M. Fano
Subject: Summer School at Varenna, Italy

The Summer School will take place at Varenna, Italy from July 7, 1958 through July 19, 1958. All participants to the school will be expected to check in on July 6th after 12 noon and to depart on July 20th before noon. The reason for these times of arrival and departure is because other summer schools will take place during the preceding week and during the following week. Yours and Mrs. Wiener's accommodations at Varenna will be taken care of by the Organizing Committee.

The Summer School will take place in the main house of an estate by the name of Villa Monastero. The town of Varenna is on the Lake of Como slightly north of Lecco. The closest large city is Milan where many transatlantic planes stop. Convenient transportation is available from Milan by train or bus.

Professor Wiesner is presently seeking support for the travel expenses of the American lecturers. He tells me that you may assume that your personal travel expenses will be covered. In addition, Dr. Stratton has made available to you a sum of up to \$1,000.00 to cover Mrs. Wiener's travel expenses and any other special needs that you might have in connection with your trip.

I suggest that you make reservations through a travel agency of your own choosing (such as American Express) at your earliest convenience. I shall keep you informed of any further developments that will be of interest to you in connection with your trip. I hope that this will provide you with the information that you need at present. Please let me know if I have forgotten to answer any of your questions.

RMF:dcs

PROPOSED SCHEDULE OF THE COURSE ON INFORMATION THEORY

1st Week: mostly Communication Theory

2nd Week: mostly Neuro- and Psychophysics

Mornings will be dedicated to basic courses; afternoons are left free for lectures on special topics, seminars and discussion groups. In the first morning, after a five-minute introduction by myself, a general discussion will be held on the present proposal and a schedule of afternoon talks may be prepared. It is suggested that this discussion start with the election of two Chairmen, one for the first and one for the second week, who will promote the discussion groups and coordinate the afternoon talks. It is proposed that in the morning of the last day the Chairmen give general talks on the arguments treated during the course by the various lecturers. If I may cast my vote in advance, I would beg Professors N. Wiener and J.B. Wiesner to accept this responsibility.

While the activities of the afternoon hours shall be planned during the general discussion, it is thought convenient to lay down the accompanying schedule for the morning hours. The lecturers are kindly requested to plan their lectures in advance, considering that the minimum preparation of the students will be at the level of Ph.D. candidates, and to hand the text of the lectures to the secretary of the School in advance of the courses, if at all possible.

Lecturers who feel that more time should be allotted to their subjects may use the afternoon hours, if it will be so agreed in the general discussion. Lecturers on related subjects are kindly requested to contact each other for a better coordination of their lectures.

I wish to remind all lecturers again that all participants in the Summer School will be housed either on the premises of the Villa Monastero, or in nearby hotels. We shall make the reservations and only need to know the number of family members of the participants and in the case of unaccompanied participants, whether they would agree to share a room with other participants: those who have not yet given us this information, are urged to do so without delay.

E.R. Caianiello
(E.R. Caianiello)

Encls: TIMETABLE

FINAL LIST OF LECTURERS AND GUESTS:

- | | |
|----------------------------|--------|
| 1. Bar-Hillel, Y. | (Isr.) |
| 2. Braitenberg, V. | (It.) |
| 3. Caianiello, E.R. | (It.) |
| 4. Davenport, W.B. | (USA) |
| 5. Fano, R.M. | (USA) |
| 6. Gabor, D. | (GB) |
| 7. Green, P.E. | (USA) |
| 8. Halle, M. | (USA) |
| 9. Haus, H. | (USA) |
| 10. Huffman, D. | (USA) |
| 11. Lee, Y.W. | (USA) |
| 12. McMillan, B. | (USA) |
| 13. Mandelbrot, B. | (Fr.) |
| 14. Moisil, G.R.C. | (Rum) |
| 15. Moruzzi, G. | (It.) |
| 16. Newman, E. | (USA) |
| 17. Rochester, N. | (USA) |
| 18. Rosenblith, W.A. | (USA) |
| 19. Schouten, J.F. | (NL) |
| 20. Schutzenberger | (Fr.) |
| 21. Slepian, D. | (USA) |
| 22. Stumpers, F.L. | (NL) |
| 23. Toraldo di Francia, G. | (It.) |
| 24. Watanabe, S. | (USA) |
| 25. Wiener, N. | (USA) |
| 26. Wiesner, J.B. | (USA) |

PROPOSED SCHEDULE OF THE MORNING LECTURERS:
(the numbers indicate the above lecturers)

1st week						
Hours	Mon	Tue	Wed	Thu	Fry	Sat
9-10	12	12	12	13	6	6
10-11	12	11	11	11	21	21
11-12	10	10	5	5	5	5
2nd week						
9-10	6	8	8	8	19	Chairman I
10-11	2	18	18	18	18	Chairman II
11-12	15	17	17	16	16	

PROPOSED PROGRAM FOR THE MORNING LECTURES:

<u>Subjects</u>	<u>Lecturers</u>	<u>Number of hours</u>
Foundations of the Statistical Theory of Communication	Mc Millan	4
Statistical Analysis of Language	Mandelbrot	1
Statistical Filtering and Prediction	Lee	3
Switching Circuits and Digital Transducers	Huffman	2
Information Measures, Channel Capacity and Coding	Fano&Slepian	6
Television Compression, Learning Filters	Gabor	3
Linguistics	Halle	3
Perception	Schouten	1
Morphology of Nerve-nets	Braitenberg	1
Neurophysiology: brainstem and cerebellum	Moruzzi	1
Neurophysics	Rosenblith	4
Artificial Intelligence	Rochester	2
Psychological Aspects of Man as an Information-Transmitting System	Newman	2

PRELIMINARY INFORMATION

about the Summer School of Information Theory in Varenna, Italy, July 7-19, 1958

Up to the present moment, our invitation has been accepted by those listed on the enclosure "A". Some more invitations are still open. A delegation of scientists from the USSR will very probably also be present.

A total of 36 lectures shall be held, during three morning hours each weekday for two weeks. The afternoons shall be devoted to seminars and lectures to be scheduled on common accord. A preliminary schedule of the lectures is enclosed ("B").

Unfortunately, because of the large number of participants, it is impossible to have all participate in the lecturing program. There will be no academic distinction, however, between lecturers and other participants. Suggestions for lectures and seminars to be put on the program should be given as soon as possible. According to the tradition of the Summer School of Physics in Varenna all courses shall be held at an advanced level. All participants are expected to attend all lectures in order to favour discussions as much as possible. The two official languages are English and French.

Lectures and seminars shall be published. There will be three tape recorders and a good secretarial service at the disposal of the school. The revision of the recorded and typewritten lectures should be done, if possible, by the lecturers themselves, during their stay in Varenna.

The lecturers will be guests of the School which will provide free lodging and meals. For members of the lecturers' families accommodations (including meals) will be provided for the price of 3.500 lire daily. The administration of the School hopes to be able to give each lecturer a retribution of about 30.000 lire.

Since the Summer School of Information Theory is only a part of the program of the Summer School of Physics in Varenna, participants are required to arrive not before noon of the Sunday preceding the beginning of the lectures and to leave not later than noon of the Sunday after the end of the program.

The announcement of the Summer School which is now in print, will be sent to all the participants and, via the Italian Embassy in the different countries, to the Universities and other Institutions.

The number of students is limited to 40. The selection will be made by the director of the School, who will be assisted in this task by representatives of the various participating countries. Students are required to pay a fee of 25.000 lire each, for the whole period, as a partial contribution to the lodging, food and other expenses sustained by the School. Details regarding the admission of students shall be given in the announcement, which can be requested from the director of the School.

The director of the Summer School of Information Theory will be happy to answer any further questions you may have and is looking forward to the pleasure of welcoming you in Varenna.

Professor E. R. Caianiello
Istituto di Fisica Teorica
Universita di Napoli
v. A. Tari, 3
Naples, Italy

List of Lecturers

Dr. W. B. Davenport, Jr.
Lincoln Lab., M I.T.

Dr. R. M. Fano
R.L.E., M.I.T.

Prof. D. Gabor
Imperial College, London

Dr. I. J. Good
Scott House, Cheltenham, England

Prof. Morris Halle
R.L.E., M.I.T.

Prof. D. A. Huffman
R.L.E., M.I.T.

Prof. Y. W. Lee
RLE, MIT.

Dr. Brockway McMillan, Asst. Director
System Engineering Division
Bell Telephone Laboratories

Dr. Edwin Newman
Psychology Dept.
Harvard University

Prof. W. Rosenblith
RLE, MIT

Prof. N. Wiener
Dept. of Mathematics
M.I.T.

Prof. J. B. Wiesner
RLE, MIT.

Enclosure "A"

List of Lecturers and Guests who have accepted to Participate in the
Varena School of Information Theory - 1958

Prof. Gabor	Prof. W. Rosenblith
Dr. I. J. Good	Prof. J. B. Wiesner
Prof. MacKay	Prof. G. Moruzzi
Dr. J. F. Schouten	Dr. David Slepian
Dr. F. L. Stumpers	Dr. Brockway McMillan
Prof. E. Mandelbrot	Prof. G.R.C. Moisil
Prof. Schutzenberger	Dr. Satosi Watanabe
Prof. N. Wiener	Dr. N. Rochester
Prof. R. M. Fano	Dr. Paul E. Green
Dr. Edwin Newman	
Dr. W. B. Davenport	
Prof. Y. W. Lee	
Prof. D. A. Huffman	
Prof. Morris Halle	

In addition, one or two participants from Israel and a Russian delegation are expected to participate.

SUMMER SCHOOL ON INFORMATION THEORY
(Varenna, Italy, July 7-19, 1958)

Sponsored by the Massachusetts Institute of Technology, the Italian
Physical Society, and the University of Naples, etc.

PROPOSED PROGRAMME

(subject to partial changes and not inclusive of the Conferences and
the Seminars to be held in the afternoon hours)

- | | | |
|----|---|---------|
| 1. | Opening Remarks and Historical Introduction | 3 hours |
| 2. | Theory of Random processes, Noise, and Statistical
Detection | 6 hours |
| 3. | Statistical Filtering and Prediction | 3 hours |
| 4. | Switching Circuits and Digital Transducers | 3 hours |
| 5. | Information Measures, Channel Capacity and Coding | 6 hours |
| 6. | Neurophysiology | 6 hours |
| 7. | Experimental Psychology | 3 hours |
| 8. | Speech Communication and Linguistics | 6 hours |

ELENCO DEI PARTECIPANTI AL 1° CORSO SULLA TEORIA DELLE
INFORMAZIONI

VARENNA - 7 - 19 LUGLIO 1958 -

DOCENTI:

Prof. BAR-HILLEL Yehoshua	The Hebrew University	Jerusalem (Israel)
Prof. BRAITENBERG Valentino	Scuola di perfezionamento di Fisica teorica e nuclea- re. Sez. Cibernetica	Napoli (Italia)
Prof. CAIANIELLO Eduardo R.	Direttore Fisica Teorica dell'Università.	Napoli (Italia)
Prof. DAVENPORT Wilbur	Head Communications and Components Division M.I.T. Lincoln Lab.	Lexington (U.S.A.)
Prof. FANO Robert M.	M.I.T. Research Laboratory of Electronics	Cambridge (U.S.A.)
Prof. GABOR D.	Dept. of Electrical Engi- neering - Imperial College	Londra (G.B.)
Prof. GREEN Paul E.	Lincoln Laboratory M.I.T.	Lexington (U.S.A.)
Prof. HALLE Morris	Research Laboratory of Electronic M.I.T.	Cambridge (U.S.A.)
Prof. HAUS Herman	M.I.T.	Cambridge (U.S.A.)
Prof. HUFFMANN David A.	Research Laboratory of Electronics - M.I.T.	Cambridge (U.S.A.)
Prof. LEE Jw.	Research Laboratory of Electronics - M.I.T.	Cambridge (U.S.A.)
Dr. McMILLAN Brockway	Assistant Director Systems Engineering Div. Bell Telephone Labs.	Murray Hill (U.S.A.)
Prof. MANDELBROT Benoit	18, Rue du Douanier	Paris, XIV ^e
Prof. NEWMAN Edwin	Psychology Department Harvard University	Cambridge (U.S.A.)
Prof. ROSENBLITH Walter	Research Laboratory of Electronics - M.I.T.	Cambridge (U.S.A.)
Ing. RIGHI	Ferrovie dello Stato	Roma (Italia)

DOCENTI:

Prof. SCHOUTEN Jan	Instituut voor Perceptie Onderzoek	Eindhoven (Olanda)
Prof. SCHUTZENBERGER Marcel	Faculté de Médecine de Paris	Parigi (Francia)
Prof. SLEPIAN David	Bell Telephone Laboratories	Murray Hill (U.S.A.)
Prof. STUMPERS Franz	Philips Research Laborat.	Eindhoven (Olanda)
Prof. WATANABE Michael S.	I.B.M. Research Laboratory	Ossining (U.S.A.)
Prof. WIENER Norbert	M.I.T.	Cambridge (U.S.A.)

ALLIEVI

BOHM Corrado	Via S. Crescenziano 20	ROMA
BRESSON François	133, Rue Lamarck	PARIGI, 18 ^e
BRIANNE Jean Claude	Cité Universitaire	LILLA
CECCARELLI Marcello	Via Irnerio 46	BOLOGNA
COLOMBO Gianni	Via Cerva 31	MILANO
CUZZER Anna	Via Dandolo 19	ROMA
FIorentINI Adriana	Istituto Nazionale di Ottica	ARCETRI (Firenze)
HASSENSTEIN		
HILL J.	66, Kidmore Road	REDDING (G.B.)
de JAGER Frank	Philips Research Laboratories	EINDHOVEN (Olanda)
LAURIA Francesco	Via Chiaia 149	NAPOLI
LEPSCHY Antonio	Viale Trastevere 189	ROMA
LOFGREN Lars	Askrikevagen 17	LIDINGO (Svezia)
LUNELLI Lorenzo	Piazza L. Da Vinci 32	MILANO
MONTANET Lucien	Organisation Européenne pour la Recherche Nucléaire	GENEVE
NAGEL Alfred Leo	Saterstoelenweg 11	EINDHOVEN (Olanda)
OHZU Hitoshi	Fabriksgasse 14/11	VIENNA, XII
ONESTO Nello	Via E. Alvino 114	NAPOLI
PANDARESE Francesco	Via Roma 124	NAPOLI
PIERANTONI Ferrante	Via Del Carro 11	BOLOGNA
QUAZZA Giorgio	Via Giambellino 48	MILANO
RUBERTI Antonio	Viale Trastevere 189	ROMA
SCHAERF Carlo	Via dei Cavalleggeri 6	ROMA
SCHALKWJIK Willem F.	Hazeloop 10	EINDHOVEN (Olanda)

ALLIEVI:

SCHNUPP Peter	Schillerstrasse 70	GOTTINGA (Germania)
van SCOONEVELD C.	Vlakte van Waalsdorp	THE HAGUE (Olanda)
SOMENZI Vittorio	Via F. Squarcialupo 36	ROMA
STAM A.J.	Vlakte van Wallsdorp	LA HAGUE (Olanda)
STIBE Lars	22, Broaklands Avenue	CAMBRIDGE
VARIU	M.P.I. fur Biologie Spemanstrasse 34	TUBINGEN
VITTORELLI Vittore	Via Principe di Belmonte 1	PALERMO
WITT Jan	Hohenzollernstrasse 118	MONACO
WOODCOCK R.	85, Ormond' Crescent,	HAMPTON (G.B.)



Kiichi Murokawa

HEAD PROFESSOR
INDUSTRIAL ENGINEERING DEPT.
SCHOOL OF TECHNOLOGY
NIHON UNIVERSITY
SURUGADAI, KANDA, TOKYO
PHONE (29)-7711-(9)

日本大學教授
工學博士 村 上 喜 一

KIICHI MURAKAMI, D. ENG.
METALLURGICAL ENGINEER
(TOKYO UNIV. '19, M.I.T. '29)

RESIDENCE AND
TRANSLATION OFFICE
(JAPANESE TECHNICAL PAPER INTO ENGLISH)
303 SHIMORENJAKU
MITAKA, TOKYO
PHONE : MUSASHINO - 3973

March 18, 1958

On January 19, 1958, I returned safely to Tokyo, having completed a pleasant round-the-world trip in 110 days.

It is a deep pleasure to me to express to you my warm thanks for the cordial hospitality you so kindly and generously extended me whilst I was with you. Your unforgettable gracious courtesies constantly remind me of the joys of my trip, and the beauties of your country, and are for me a delight I shall ever hold in fond and grateful memory.

From Tokyo I went to Honolulu, thence to San Francisco, Palo Alto and Fresno, California. Then I journeyed to Vancouver, Edmonton, Fort Saskatchewan, Toronto, Sudbury and Copper Cliff, Canada. From there I went to Boston and Cambridge, Massachusetts, thence to New York City where I joined the Second World Metallurgical Congress. From there I proceeded to Waterbury and Hartford, Connecticut. Then I visited Albany, Schenectady and Buffalo, New York; Cleveland and Toledo, Ohio; McCook and Chicago, Illinois.

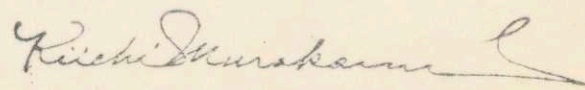
After the Congress was adjourned I went to Columbus, Ohio; University Park, Pennsylvania; Burlington, Vermont; again Boston and Cambridge, Massachusetts; New York City; Washington, D.C., and back to New York.

Then I flew to Europe, arriving first London, England, thence to Oslo, Norway, Stockholm, Sweden; Copenhagen, Denmark; Hamburg, Berlin and Düsseldorf, West Germany; Paris, France; Geneva and Zürich, Switzerland; Milan, Rome, Naples, Pompei and Sorrento, Italy; and to Zuerich, Switzerland again. From Zuerich I flew back to Tokyo.

Thanks to your help, I could spend about 30 days (of the 110 days of my trip) for the Second World Metallurgical Congress, joining its Study Tour from New York to Chicago, and participating in its Conferences at Chicago. The remaining 80 days of my journey I spent studying and enjoying the world, visiting schools, laboratories, factories, operas, scenic places, etc. Such a pleasant trip could not have been possible without the kindness I received from dear friends like you from the time my trip was planned until its happy conclusion.

Repeating my deep thanks to you, and with happiest recollections and every good wish, I am

Yours faithfully,



(Kiichi Murakami)

[ans 4-25-58]

HEAD PROFESSOR
INDUSTRIAL ENGINEERING DEPT.
SCHOOL OF TECHNOLOGY
NIHON UNIVERSITY
SURUGADAI, KANDA, TOKYO
PHONE (29)-7711-(9)

日本大學教授
工學博士 村上喜一

KIICHI MURAKAMI, D. ENG.
METALLURGICAL ENGINEER
(TOKYO UNIV. '19, M.I.T. '29)

RESIDENCE AND
TRANSLATION OFFICE
(JAPANESE TECHNICAL PAPER INTO ENGLISH)
303 SHIMORENJAKU
MITAKA, TOKYO
PHONE : MUSASHINO - 3973

MANUSCRIPT OF THE SPEECH*

delivered by

Dr. Kiichi Murakami, Head
Professor of Industrial Engineering Department, School of Science
and Technology, Nihon University, Tokyo, to an audience of about
seven hundred attending the "Farewell to America" Party of the
Second World Metallurgical Congress, November 8, 1957, in the
Grand Ball Room, Palmer House, Chicago, Illinois, U.S.A.

Dr. Jeffries, Mr. Eisenman, Ladies and Gentlemen:

It is a very great pleasure to me to have come here at the invitation
of the American Society for Metals to attend the Second World Metallurgical
Congress.

My Japanese friends and I wish to extend our sincerest gratitude to
all of you for the magnificent receptions accorded us and having shared
with us your delicious American foods.

Time flies rapidly! It is already six years since I attended the
First World Metallurgical Congress. That was in 1951, the memorable year
of the peace treaty. At that time, out of 400 overseas conferees, only
about 20 were from Japan, with Dr. Tokushichi Mishima, now Professor
Emeritus of the Tokyo University, the inventor of the ALNICO Magnet and
the winner of Albert Sauveur Achievement Award for 1957, as our leader.
At the present Congress, out of about 500 overseas conferees, over 50 are
from Japan. This increased number of Japanese conferees is not due to the
growing population of Japan, but to Japan's technical growth and to the
strengthening of the bonds between the Japanese and the American people.

This time Professor Obinata, an authority on nonferrous metallurgy,
was chosen as leader of the group of Japanese conferees, and myself as
vice-leader. Professor Obinata, as you know, has done outstanding research
work in aluminum and other light metals. For myself I can make no such
claim to fame. However, I am now of such antiquity as to have special rela-
tions to metals. I have, for example, gold in my teeth, silver in my hair,
lead in my legs -- and may be some strontium 90 in my bones! I hope this
provides at least one qualification for me to attend, as a leader, this
great Metallurgical Congress.

Be that as it may, allow me to tell you again how very pleased I am
to be here, and to have taken part in this interesting Conference. I must
also, on behalf of the Japanese conferees, and the industries of Japan,
assure you of our forever appreciation of your cordial hospitalities and
exceptional courtesies.

Thank you very much!

* Recomposed by memory.

THE SPHINX
"QUI SOLVIT SOLVITUR"

March 19, 1958

Dear Dr. Wiener,

This letter is just to make the final arrangements for our engagement on March 27. We usually start our meetings at 7:30 PM. They are held at The Faculty Club, which is at the corner of McGee and Benevolent Streets. The speeches, which are usually 45 minutes to one hour, are followed by discussion and refreshments.

I have checked the train schedule from Boston to Providence. A train leaves Boston at 6:00 PM and arrives at Providence at 7:10 PM, which would be very convenient for our meeting. However, if this conflicts with your meal hour and you would like to come earlier, we would be more than happy to entertain you at dinner. After the meeting trains leave Providence at 9:44 PM and 10:48 PM and arrive at Boston at 10:45 PM and 11:50 PM respectively.

Please let me know what your plans will be so that I can arrange things. We are all looking forward eagerly to meeting you and hearing you speak.

Respectfully yours,
Ralph Ginsburg

51.00.
51.08
51.35

Ramanujan Institute of Mathematics

(XXXXXXXXXX)

Phone: XXXXX

Senate House,
University Buildings,
Madras-5(S.India).

XXXXXXXXXXXXs"

XXXXXXXXXXXX

195

19th March, 1958.

Dear Professor Winer,

Sometime back I approached you, on behalf of the Indian Mathematical Society, with an informal appeal to you to join in the golden-jubilee celebrations of the Society, by sending a mathematical contribution to the special jubilee volume of the journal of the Society. The enclosure is a reiteration of my appeal by the President of the Indian Mathematical Society, Professor V.Ganapathy Iyer.

Encl:1

Yours Sincerely,

C.T. Rajagopal

C.T.RAJAGOPAL

[ans 3/28/58]

INDIAN MATHEMATICAL SOCIETY

President : Prof. V Ganapati Iyer
Annamalai University

Secretary : Prof. S. Mahadevan
2, Bhaskarapuram, Madras 4

Editor : Prof. S. M. Shah
Muslim University, Aligarh

ANNAMALAINAGAR
15-3-58

PIMS 49

Dear Prof. Wiener,

The Indian Mathematical Society will be celebrating its Golden Jubilee under the auspices of the Poona University in

December, 1958. As part of the Jubilee Celebration, it is proposed to bring out a Jubilee Volume consisting of invited articles on Mathematics from distinguished Mathematicians from India and abroad. As the present President of the Society, I request you to contribute a paper for the Jubilee Volume. The paper may either be an original research paper or a survey of recent advances (and possible lines of development) in any of the topics in Mathematics in which you have

specialised. The manuscript of the paper may be made available to Prof. C. T. Rajagopal, Director, Ramanujan Institute of Mathematics, Senate House, Madras University, Triplicane, Madras-5 (S. India) not later than the 15th of October, 1958.

Thanking you,

To

Prof. N. Wiener,
Mass. Inst. of Tech.,
CAMBRIDGE.

I remain,

yours sincerely,

V. G. Iyer

INSTITUT FÜR PRAKTISCHE MATHEMATIK (IPM) · PROFESSOR DR. A. WALTHER
TECHNISCHE HOCHSCHULE DARMSTADT

(16) DARMSTADT, March 19, 1958
Telefon 4936

Prof. Dr. Norbert Wiener
Massachusetts Institut of Technology
Division of Mathematics

Cambridge 38 / Mass.
USA

53 Cedar Road
Belmont / Mass.
USA

Betr.: Besuch von Dipl.-Math. W. Händler

Lieber Herr Wiener,

meine Frau und ich hoffen, daß es Ihrer Frau immer besser geht. Als wir sie im Oktober im Krankenhaus besuchten, waren wir doch sehr erschrocken, weil wir von der ganzen Krankheit vorher überhaupt nichts gewußt hatten. Es war schade, daß ich Sie durch Ihre Reise damals nicht treffen konnte. Aber früher oder später wird es schon wieder einmal klappen.

Einstweilen können Sie hoffentlich sozusagen als Vertreter einen Freund von mir begrüßen, Herrn Dipl.-Math. W. Händler, der jetzt bei der Firma Telefunken in Backnang/Württ. tätig ist. Er macht mit zwei Kollegen Dr. Koch und Dr. Leilich eine Studienreise nach USA und wird auch das MIT besuchen. Ich bitte Sie, ihn in Ihrer Abteilung für Elektronik einzuführen und ihm die dortigen interessanten Entwicklungen zeigen zu lassen.

Mit herzlichen Grüßen von Haus zu Haus

Ihr

A. Walther

[Ans 4-4-58]

INSTITUT FÜR PRAKTISCHE MATHEMATIK (IPM) · PROFESSOR DR. A. WALTHER
TECHNISCHE HOCHSCHULE DARMSTADT

(16) DARMSTADT, March 19, 1958
Telefon 4936

Prof. Dr. Norbert Wiener
Massachusetts Institut of Technology
Division of Mathematics

Cambridge 38 / Mass.
USA

53 Cedar Road
Belmont / Mass.
USA

Betr.: Besuch von Dipl.-Math. W. Händler

Lieber Herr Wiener,

meine Frau und ich hoffen, daß es Ihrer Frau immer besser geht. Als wir sie im Oktober im Krankenhaus besuchten, waren wir doch sehr erschrocken, weil wir von der ganzen Krankheit vorher überhaupt nichts gewußt hatten. Es war schade, daß ich Sie durch Ihre Reise damals nicht treffen konnte. Aber früher oder später wird es schon wieder einmal klappen.

Einstweilen können Sie hoffentlich sozusagen als Vertreter einen Freund von mir begrüßen, Herrn Dipl.-Math. W. Händler, der jetzt bei der Firma Telefunken in Backnang/Württ. tätig ist. Er macht mit zwei Kollegen Dr. Koch und Dr. Leilich eine Studienreise nach USA und wird auch das MIT besuchen. Ich bitte Sie, ihn in Ihrer Abteilung für Elektronik einzuführen und ihm die dortigen interessanten Entwicklungen zeigen zu lassen.

Mit herzlichen Grüßen von Haus zu Haus

Ihr

A. Walther

Sehr geehrter Herr Professor **Wiener**

Dear Dr.

Monsieur le Professeur,

*Recd
April 9,
1958*

Für die Übersendung eines Sonderdruckes Ihrer Arbeit:

I would greatly appreciate a reprint of your article:

Je vous serais très obligé de m'envoyer un tirage à part de votre article intitulé:

Nature vol.181 (1958) page 561

wäre ich Ihnen sehr dankbar. Mit freundlichen Grüßen!

Sincerely yours

Je vous en remercie par avance et vous prie de croire, Monsieur le Professeur, à mes sentiments les plus distingués

R Zahn

Privat-Dozent Dr. Rudolf K. Zahn
Frankfurt/Main-Süd 10

Ludwig-Rehnstraße 14, Theodor-Stern-Haus

Internationale
DRUCKSACHE
frankfurter
Messe
7.-11. Sept. 1958



Prof. Dr. N. Wiener

Massachusetts Institute of Techno-
logy

Massachusetts/USA

March 19, 1958

Mr. Wallace R. Brode, Editor
Journal of the Optical Society of America
National Bureau of Standards
Washington 25, D. C.

Dear Mr. Brode:

I am enclosing herewith the manuscript
"Radiative Transfer Axions" by Rudolph W. Preisendorfer.
I am unable at this time to judge it in detail, but
am enclosing some notes I made in looking at it briefly.
They are not to be taken too seriously and are just
thoughts that occurred to me as I glanced at it.
I do not feel that in justice I can hold it any longer.

Sincerely yours,

Norbert Wiener

NW:AD
Enc.

March 19, 1958

Professor Tosio Kitagawa
9 Chambers Terrace,
Princeton, New Jersey

Dear Professor Kitagawa:

I am delighted to hear that you are in this country and I want very much to be in touch with you. Will it be convenient for you to stay with us for about three days at our house at 53 Cedar Road, Belmont? Margaret is delighted to hear that you are coming. I shall be at your disposal any time in the week following the 18th of April as I have no other engagements at that time.

I have a lot of statistical theory to discuss with you, and I am looking forward to it very much.

Sincerely yours,

Norbert Wiener

NW:AD

March 19, 1958

Mr. James P. McCormick
Assistant to the Vice President
Academic Administration
Wayne State University
Detroit 2, Michigan

Dear Mr. McCormick:

Thank you for your letter of March 12th
giving the details of the College Professor Symposium.

I plan to arrive in Detroit by plane on
April 15th at 9:23 P.M.

In accordance with a previous request, a
copy of my proposed talk is enclosed herewith.

Sincerely yours,

Norbert Wiener

NW:AD
Enc.

March 19, 1958

Professor Tosio Odanaka
Mathematical Department
Tokyo Metropolitan Technical College
Tokyo, Japan

Dear Professor Odanaka:

In reply to your letter of March 14th, I am sending you under separate cover a reprint of some of my work on prediction theory with Dr. Masani. I shall soon have more material to send you on random function. I am delighted to hear that you are working in this field.

Sincerely yours,

Norbert Wiener

NW: AD

March 19, 1958

Mr. John D. Upham
3004 Forest Grove Avenue
Dayton 6, Ohio

Dear Mr. Upham:

Many thanks for your letter of March 16th advising me of the death of John R. Womersley. He was a person of fine character and outstanding scientific ability. He will be greatly missed by his associates.

I have written to Mrs. Womersley, and again thank you for letting me know.

Sincerely yours,

Norbert Wiener

NW:AD

March 19, 1958

Mrs. John R. Womersley
1932 Emerson Avenue
Dayton 6, Ohio

My dear Mrs. Womersley:

It is with a great shock that I have learned of the death of your husband on March 7th. He was a fine scholar, a good friend, and a man of a type I greatly admire.

If there is anything I can do for you, particularly with regard to his literary and scientific remains, consider me at your disposal.

Please convey my condolences to the rest of his family.

Sincerely yours,

Norbert Wiener

NW:AD

[see 3/16/58]